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of Transportation
**Federal Aviation
Administration**

Federal Aviation Regulations

Part 127
Certification and Operations of Scheduled Air Carriers With Helicopters

Published April 1974

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This consolidated reprint
incorporates:
Changes 1 through 21
as of 8/18/90 & 10/25/89

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Part 127

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Introductory Note

Part 127 is codified under Subchapter G, Air Carriers, Air Travel Clubs, and Operators for Compensation or Hire: Certification and Operations, of Title 14 of the CODE OF FEDERAL REGULATIONS.

This FAA publication of the basic Part 127, effective November 2, 1964, incorporates Amendments 127–1 through 127–31 and any changes required by the Department of Transportation transition amendment.

Part 127—Certification and Operations of Scheduled Air Carriers with Helicopters

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ADOPTION OF PART 127

Adopted: August 11, 1964 **Effective: November 2, 1964**

(Published in 29 F.R. 11708, August 15, 1964)

This amendment adds Part 127 "Certification and Operations of Scheduled Air Carriers with Helicopters" [New] to the Federal Aviation Regulations to replace the requirements contained in Part 46 of the Civil Air Regulations and is part of the Agency recodification program. Part 127 [New] was published as a notice of proposed rule making in the Federal Register on May 7, 1964 (29 F.R. 6047).

A number of changes have been made in the proposal, both as a result of comments received and as a result of further review by the Agency. Some of the comments received recommended substantive changes of the regulations. Although some of these recommendations might, upon further study, appear to be meritorious, they cannot be adopted as a part of the recodification program. However, all comments of this nature will be preserved and considered in any later substantive revision of this Part.

One comment indicated, correctly, that the word "unless" should be added to paragraph (a) of § 127.73 to be consistent with the present requirements of § 46.63. This correction has been made.

Another comment indicated that the word "approved" should be deleted from § 127.151(a) since present § 46.280 does not require formal approval of the training program required by this Part. This deletion has been made.

As indicated in the preamble to the notice of proposed rule making § 127.27 was revised to include certain provisions giving an air carrier certain rights not presently contained in Part 46 relating to the amendment of operations specifications. This section has been further revised to make it more consistent with comparable provisions in present Parts 40, 41, and 42, concerning amendments to air carrier operations specifications. While these changes are mainly procedural in nature, they have some substantive effect in that they give the carriers additional rights and privileges.

Section 127.93 has been amended to make it clear that an air carrier may carry cargo in the passenger compartment, in accordance with the limitations stated therein, whenever the cargo cannot be loaded in approved cargo racks, bins, or compartments that are separate from passenger compartments. Section 46.153 presently states that an air carrier may exercise this privilege only whenever *operating conditions require* the carriage of cargo outside of the specified approved cargo racks, bins, or compartments. The Agency feels that rarely could it be shown that operating conditions "require" the carriage of cargo that cannot be loaded in the approved locations and that this limitation should therefore be removed. As revised this section is more consistent with comparable provisions of present Parts 40, 41, and 42.

Section 127.107 has been expanded to make clear that the word "approved" is not limited to approval of fire extinguishers by the Administrator. This expansion of the word "approved" has been carried as a note in Part 41 of the Civil Air Regulations and as CAM material in Part 40. Since the additional language is relaxatory in nature it can be added as a part of the recodification program.

Section 127.191 has been revised to eliminate the term "duty aloft" and substitute "flight time". As presently defined in Part 46 "duty aloft" means "flight time". Since "flight time" is defined in Part 1 [New] the term "duty aloft" is unnecessary.

Subpart I "Maintenance, Preventive Maintenance, and Alterations" has been revised to reflect Amendment 46–9 published in the Federal Register on May 20, 1964 (29 F.R. 6522).

As stated in the notice of proposed rule making, Part 1 [New] includes "inspection" within the definition of the term "maintenance". Consistent with this definition, the term "maintenance" as used in this Part includes "required inspections" performed by a separate inspection organization under Amendment 46–9. Whenever a rule is directed to all maintenance functions except required inspections, the term "maintenance" is modified by specifically excluding "required inspections".

Special Civil Air Regulations SR 448A and SR 455 and § 14 of SR 425C, as applicable to operations under Part 127 [New] have been included as §§ 127.227, 127.212, and 127.85, respectively.

Other minor changes of a technical nature have been made. They are not substantive and do not impose any burden on regulated persons.

The definitions, abbreviations, and rules of construction contained in Part 1 [New] of the Federal Aviation Regulations apply to Part 127 [New].

In consideration of the foregoing, Chapter I of Title 14 of the Code of Federal Regulations is amended, effective November 2, 1964, by deleting Part 46 and by adding Part 127 [New] reading as hereinafter set forth.

This amendment is made under the authority of sections 313(a), 601, 604, and 605 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, 1424, and 1425).

Amendment 127–1

Miscellaneous Amendments

Adopted: December 23, 1964 **Effective: April 1, 1965**

(Published in 29 F.R. 19096, December 30, 1964)

The purpose of this amendment is to complete the remainder of the Agency's recodification program.

Paragraph (2) of SR 448A dealt with the prohibition against carrying a dangerous weapon while on board air carrier aircraft. Since its applicability extended only to air carrier aircraft, SR 448A(2) is being recodified by adding § 121.585 (to be issued separately) and a new § 135.64. Section 127.227(c) already reflects SR 448A(2). Since SR 448A(1), which was the basis for paragraphs (a) and (b) of § 127.227, is hereby being recodified as § 91.8, § 127.227 is being amended to delete those paragraphs. In addition, § 127.139 is being clarified by adding to it a definition, taken from CAM 40.241–1, of "directly in charge". This definition reflects the sense in which the term is used in this section and in § 121.378, where it will also be added.

In addition, it is no longer necessary to use the word "[New]" when referring to a Part of the Federal Aviation Regulations. This is possible because all Civil Air Regulations in Chapter I of Title 14, with the issue of Part 121, have now been replaced by Federal Aviation Regulations.

In consideration of the foregoing, Part 127 of the Federal Aviation Regulations (14 CFR Part 127) is amended, effective April 1, 1965.

This amendment is made under the authority of §§ 307, 313(a), 314, 501, 601–610, 902(c), 1102, 1110, and 1202 of the Federal Aviation Act of 1958 (49 U.S.C. 1348, 1354(a), 1355, 1401, 1421–1430, 1472(c), 1502, 1510, and 1522).

Amendment 127-2

Airworthiness Release or Helicopter Log Entries

Adopted: April 29, 1965 **Effective: May 9, 1965**

(Published in 30 F.R. 6432, May 8, 1965)

The purpose of these amendments is to clarify the requirements concerning the certification required to be included in the airworthiness release or aircraft log entry following maintenance, preventive maintenance, or alterations on an aircraft. These requirements are set forth in § 121.709 of Part 121 (formerly Parts 40, 41, and 42 of the Civil Air Regulations) and § 127.319 of Part 127 of the Federal Aviation Regulations. While the following discussion refers only to § 121.709, it is also applicable to § 127.319 since both sections contain similar requirements.

As pertinent here, § 121.709(a) provides that a certificate holder (i.e., an air carrier or commercial operator) may not operate an aircraft after maintenance, preventive maintenance or alterations are performed on it unless there has been prepared an airworthiness release or appropriate entry in the aircraft log. Section 121.709(b) requires that the airworthiness release or log entry be prepared in accordance with the requirements of the certificate holder's manual and that it must include a certification that:

(i) The work was performed in accordance with the requirements of the certificate holder's manual;

(ii) All items required to be inspected were inspected by an authorized person who determined that the work was satisfactorily completed;

(iii) No known condition exists that would make the airplane unairworthy; and

(iv) So far as the work performed is concerned, the aircraft is in condition for safe operation.

In addition, § 121.709(b)(3) requires that the release or entry must be signed by an authorized certificated mechanic or repairman.

Some question has arisen as to whether this certification must be literally repeated for each airworthiness release or log entry or whether some other means of compliance with the requirement would satisfactorily carry out its purpose with no adverse effect on safety. The Agency recognizes that restating the certification each time that an airworthiness release or log entry is made may be a burdensome procedure for some certificate holders. After some consideration of this matter, the Agency has concluded that it would not be inconsistent with the purpose of the certification requirement to permit a certificate holder who so desires to provide that the signature of the person signing the airworthiness release or log entry constitutes the required certification. Accordingly, these amendments make it unnecessary for a certificate holder to repeat the certification statement each time an airworthiness release or aircraft log entry is made. To provide assurance that the person signing the release or entry is aware that his signature constitutes the certification, the amendments also require that a certificate holder who chooses this method of making the certification must include a statement to this effect in its manual.

Since these amendments do not change the existing rules but merely provide an alternative means of compliance with them, and impose no additional burden on any person, I find that notice and public procedure thereon are unnecessary and that good cause exists for making them effective with less than 30 days' notice.

In consideration of the foregoing, Chapter I of Title 14 of the Code of Federal Regulations is amended effective May 9, 1965, as follows.

This amendment is made under the authority of sections 313(a), 601, 604, 605, and 607 of the Federal Aviation Act of 1958 (49 U.S.C. 1354, 1421, 1424, 1425, and 1427).

Amendment 127–3

Presence of Crewmembers at Duty Stations

Adopted: October 8, 1965 **Effective: October 15, 1965**

(Published in 30 F.R. 13120, October 15, 1965)

The purpose of this amendment is to clarify the present requirements of Parts 91, 121, and 127 of the Federal Aviation Regulations relating to the presence of flight crewmembers at the controls of the aircraft during flight time.

As presently written, the rules prescribe that each required flight crewmember on flight deck duty be present at his station while the aircraft is taking off or landing, and while it is en route unless his absence is necessary for the performance of duties in connection with the operation of the aircraft.

Since the adoption of this rule, the Agency has endeavored to make it clear that flight crewmembers' physical alertness and comfort are necessary for the performance of duties in connection with the operation of the aircraft, within the meaning of the rule. There have, however, been occasional misunderstandings of this intent. For this reason the Agency considers that the safety purposes of the present regulation would better be achieved by amending the regulations specifically to provide for the necessary absence of crewmembers from their duty stations when required for physical alertness and comfort.

For the foregoing reasons it is determined that notice and public rule-making procedures are unnecessary and impractical in the case of this amendment and that good cause exists for making it effective within less than 30 days.

In consideration of the foregoing, § 127.207 is amended, effective October 15, 1965.

This amendment is made under the authority of §§ 313(a) and 601 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a) and 1421).

Amendment 127–4

Assignment of Emergency Duties to Crewmembers, and Alcoholic Beverage Consumption on Helicopters Operated by Scheduled Air Carriers

Adopted: November 24, 1965 **Effective: December 31, 1965**

(Published in 30 F.R. 14919; December 2, 1965)

This amendment adds to Part 127 of the Federal Aviation Regulations sections 127.147, and 127.229 to provide for the assignment of individual emergency evacuation functions to required crewmembers on helicopters operated by scheduled air carriers, and for the control of drinking and service of alcholic beverages on those helicopters.

This amendment was originally proposed as a notice of proposed rule making issued as Notice No. 65–17 and published in the Federal Register on July 30, 1965 (30 F.R. 9548).

All of the written comments that were received favored the proposed amendments.

Interested persons have been given an opportunity to participate in the making of this amendment, and careful consideration has been given to all relevant matter presented.

In consideration of the foregoing, and for the reasons set forth in Notice No. 65–17, Part 127 of the Federal Aviation Regulations is amended, effective December 31, 1965.

These amendments are made under the authority of sections 313(a), 601, and 604(a) of the Federal Aviation Act of 1958 (49 U.S.C. 1354, 1421, 1424).

Amendment 127–5

Cross Reference Corrections in FAR Parts 21, 33, 37, 43, 61, 63, 91, 127, 133, 141, 145, 149, and 183

Adopted: June 28, 1966 **Effective: July 6, 1966**

(Published in 31 F.R. 9211, July 6, 1966)

These amendments update certain cross references in the Federal Aviation Regulations and make other miscellaneous corrections.

At the time of the recodification, it was necessary to include in the Federal Aviation Regulations cross references to the Civil Air Regulations or Special Civil Air Regulations where the referenced provision had not yet been recodified. These amendments update all these cross references in instances where no substantive change is involved. In some instances, the cross references as updated herein have been anticipated in compilations and reprints of the respective Parts of the regulations.

For convenience, a table is utilized to state the changes that can be accomplished by a mere substitution of the proper cross reference.

The original publication of section 91.101(a) referred to the "Bureau of Commerce" instead of the "Bureau of Customs". This error is being corrected. The introductory sentence of subparagraph (b)(5) of Appendix B of Part 141 is corrected by the addition of a line of text that was inadvertently omitted in the recodification.

Since this amendment does not involve any substantive change and does not impose a burden on any person, notice and public procedure thereon are unnecessary, and the amendment may be made effective immediately.

In consideration of the foregoing, Chapter I of Title 14 is amended, effective July 6, 1966.

This amendment is made under the authority of section 313(a) of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a)).

Amendment 127–6

Repair Stations Performing Work on Air Carrier and Commercial Operators' Aircraft

Adopted: August 2, 1966 **Effective: September 8, 1966**

(Published in 31 F.R. 10612, August 9, 1966)

The purpose of this amendment to Parts 121, 127 and 145 of the Federal Aviation Regulations is to clarify the requirements for repair stations performing maintenance, preventive maintenance, alterations and required inspections on aircraft of air carriers and commercial operators. Primarily, the amendment adds a new section to Part 145 that requires repair stations to perform work on air carrier and commercial operators' aircraft in accordance with applicable sections of Parts 121 and 127 and the air carriers' or commercial operators' manuals. Moreover, the performance standards for repair stations have been amended to accommodate the foregoing changes, and Parts 121 and 127 have been amended to take into consideration the performance of maintenance, preventive maintenance, alterations and required inspections by certificated foreign repair stations.

This action was published as a Notice of Proposed Rule Making (30 F.R. 15296, December 10, 1965) and circulated as Notice 65–37 dated December 6, 1965.

A basic objection in principle to the entire proposal was voiced by one commentator to the effect that the new § 145.2 appeared to be a means of delegating basic FAA responsibility for repair station surveillance to the air carrier. The commentator alleged that the scheme would be disadvantageous to the air carrier and even more so for a carrier with a repair station certificate who would then be burdened with dual regulation.

The commentator does not explain how the proposed amendment would shift the basic FAA responsibility for repair station surveillance to the carriers. Section 121.363, cited by the commentator in support of its conclusion, makes the certificate holder (air carrier or commercial operator) primarily responsible for the airworthiness of its own aircraft and for the performance of maintenance on those aircraft even where arrangements have been made with another person for the performance of such work. The new § 145.2 merely requires that repair stations comply with the appropriate maintenance, preventive maintenance, and alteration subparts of Parts 121 and 127 when performing work for air carriers or commercial operators. It does not relieve the air carriers or commercial operators of the responsibility which they have always had as set forth in §§ 121.363 and 127.131 nor does it extend that responsibility.

As proposed, § 145.2(a) listed by number the sections of Subpart L, Part 121 and Subpart I, Part 127 with which a repair station performing maintenance, preventive maintenance, alterations, or required inspections for an air carrier or commercial operator having a continuous airworthiness program, need not comply. Omitted from the list were §§ 121.379 and 127.140 relating to the authority of certificate holders to perform these functions for itself, to perform them for other carriers, and to approve for return to service. Since it is clear that §§ 121.379 and 127.140 have no application to repair stations performing work for air carriers and commercial operators, § 145.2 has been changed to include these sections in the list of those for which compliance is not required.

Interpreting the proposed § 145.2(b) as requiring that a repair station performing maintenance, preventive maintenance, or alterations for air carriers or commercial operators have the same recordkeeping system as the air carriers or operators, one commentator recommended a change which, in effect, would allow the carrier or operator to accept the repair station system. In this connection, since the regulations applicable to an air carrier or commercial operator allow them to utilize any suitable system of recording maintenance, provided it includes certain information, this alternative is already available under the existing regulation, and the recommended change is unnecessary. Moreover, under Part 145 a repair station may retain a copy of the log or other record provided by the air carrier or commercial operator in meeting its reporting and recordkeeping requirements. Therefore the proposed new § 145.2(b) is unnecessary and has been deleted along with the related change proposed to § 145.79(b).

A comment was also received which appeared to be objecting to the proposed clarifying amendments to Parts 121 and 127 excepting from the airman certificate requirements, persons performing maintenance, alterations and required inspections in certificated foreign repair stations. However, this exception is based on the provisions of Part 145 governing foreign repair stations which state that station supervisors and inspectors do not need airman certificates, and, along with persons performing the work of the station, are not considered to be airmen within the meaning of section 101(7) of the Federal Aviation Act of 1958. Under this exception, it has been the practice of the Agency to permit U.S. air carriers to utilize the services of foreign repair stations notwithstanding the fact that such stations need not employ holders of U.S. mechanic certificates. Thus, the amendments as proposed were merely designed to clarify the provisions of Parts 121 and 127 insofar as foreign repair stations are concerned and to make them consistent with the manner in which they are being administered. Insofar as the comment may have been directed toward requiring airman certificates for personnel of all repair stations, domestic and foreign, it goes beyond the scope of this Notice of Proposed Rule Making.

One commentator, referring to "certificate foreign repair stations" as used in the proposed amendments to Parts 121 and 127, stated that the wording should further specify whether these are FAA certificated foreign repair stations. To preclude any misunderstanding as to what foreign repair stations are intended, §§ 121.378(a), 121.709(b), 127.139(a) and 127.319(b) have been further amended to identify the excepted repair stations as those certificated under the provisions of Subpart C of Part 145.

On March 25, 1966, the Agency amended Part 145 by adding Subpart D—Limited Ratings for Manufacturers. Notice 65-37, on which the present rule-making action is based, however, was issued earlier, December 6, 1965, and, therefore, did not speak directly to manufacturers with limited repair station ratings performing maintenance or

preventive maintenance on, and approving for return to service, aircraft of air carriers and commercial operators. As proposed, however, new § 145.2, is applicable to all repair stations performing such work. Since manufacturers with limited repair station ratings may perform the work specified in § 145.2, and, in addition, qualify as certificated repair stations for which the performance standards of Part 43 are applicable, the performance standards of § 145.105 applicable to such manufacturers are amended to provide the same exception with respect to § 145.2 as contained in § 145.57 for other repair stations.

Other minor changes of an editorial or clarifying nature have been made. They are not substantive and do not impose any additional burden on regulated persons.

Interested persons have been afforded the opportunity to participate in the making of this amendment. All relevant material submitted has been fully considered.

In consideration of the foregoing, Parts 121, 127 and 145 of the Federal Aviation Regulations are amended effective September 8, 1966.

This amendment is made under the authority of sections 313(a), 601, 605, and 607 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, 1425, and 1427).

UNNUMBERED AMENDMENT

Technical Amendments to Reflect Transition to Department of Transportation

Adopted: April 4, 1967 **Effective: April 1, 1967**

(Published in 32 F.R. 5769, April 11, 1967)

The purpose of these amendments is to make changes in the Federal Aviation Regulations that are necessary because of the taking effect of the Department of Transportation Act (49 U.S.C. 1651 et seq.) on April 1, 1967. On April 1, 1967, the Federal Aviation Agency became the Federal Aviation Administration in the Department of Transportation, and the aviation safety functions of the Civil Aeronautics Board under Titles VI and VII of the Federal Aviation Act of 1958 were transferred to the National Transportation Safety Board.

This rule-making action therefore changes the term "Federal Aviation Agency", wherever it occurs in the Federal Aviation Regulations, to "Federal Aviation Administration", and the word "Agency" when used alone to denote the Federal Aviation Agency to "FAA". For reasons of economy the editions of these regulations that are currently for sale will not be reprinted merely to make these changes. Whenever they are reprinted for other reasons, the printing changes will be made. However, the pages of Part 1 reflecting the changes in definition of the term "Administrator" and the abbreviation "FAA" will be reprinted as soon as possible.

The changes made in the Parts containing references to the Civil Aeronautics Board that are affected by the transfer of functions to the National Transportation Safety Board are self-explanatory. Pages containing these changes will also be reprinted as soon as possible.

Notice and public procedure thereon are not required since these amendments merely reflect changes of law, and they may therefore be made effective immediately.

In consideration of the foregoing, the Federal Aviation Regulations (14 CFR Chapter I) are amended, effective April 1, 1967.

These amendments are made under the authority of sections 3(e), 6(c) and 9(f) of the Department of Transportation Act (15 U.S.C. 1652(e), 1655(c), 1657(f)) and section 313(a) of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a)).

Amendment 127–7

Maintenance Log

Adopted: January 19, 1968 **Effective: February 24, 1968**

(Published in 33 F.R. 911, January 25, 1968)

The purpose of this amendment to the Federal Aviation Regulations is to delete paragraph (c) of § 127.311 which requires scheduled air carriers with helicopters to include in the helicopter maintenance logs information from which the flight crew may readily determine the time since the last overhaul of the airframe and engine. With the deletion of paragraph (c), § 127.311 is for all intent and purposes identical to the maintenance log provisions of § 121.701 for air carriers and commercial operators of large aircraft.

This amendment was published as a Notice of Proposed Rule Making (32 F.R. 13417, September 23, 1967) and circulated as Notice 67–40.

All of the comments that were received favored the proposed amendment. However, one commentator recommended that the regulations specifically provide that the pilots would have ready access to the airframe and engine total time and time between overhaul data. Although the commentator did not present any information in support of its recommendation, the FAA considered substantially the same recommendation in connection with a similar maintenance log requirement applicable to air carriers and commercial operators of large aircraft at the time it was deleted from proposed Part 121 during the FAA recodification program. As determined at that time, such a requirement is not necessary and if a flight crew desires this information it may be obtained from other records.

Interested persons have been given the opportunity to participate in the making of this amendment, and careful consideration has been given to all relevant matter presented.

This amendment is made under the authority of sections 313(a), and 601 through 610 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a) and 1423 through 1430).

In consideration of the foregoing, § 127.311 of Part 127 of the Federal Aviation Regulations is amended effective February 24, 1968.

Amendment 127–8

Aircraft Proving Tests

Adopted: July 12, 1968 **Effective: August 18, 1968**

(Published in 33 F.R. 10329, July 19, 1968)

The purpose of these amendments is to eliminate the requirement that aircraft proving tests be conducted by Part 121 and 127 certificate holders over "authorized routes," and to except aircraft proving tests from the deviation authority contained in § 127.17(b).

A Notice of Proposed Rule Making was published in the Federal Register on October 25, 1967 (32 F.R. 14777) containing proposed amendments to Parts 121 and 127. The Notice was issued in response to the petition of the Airline Transport Association of America (ATA) for amendment of § 121.163 by deleting the requirement for conduct of proving tests over "authorized routes" and by deleting the further requirement that such tests be conducted under the supervision of the Administrator. While the ATA petition related only to § 121.163, the FAA felt that the proving test requirements for helicopters under Part 127 involved the same considerations and should be identical with the requirements for airplanes. For that reason, amendments to §§ 127.17(b) and 127.73 were also proposed in the Notice.

Interested persons were afforded an opportunity to participate in the rule making through submission of written comments. Due consideration has been given to all relevant matter presented.

The Air Transport Association of America and the Airline Pilots Association commented on the Notice of Proposed Rule Making. The ATA, while commenting favorably on the elimination of the requirement that proving tests be conducted over authorized routes, restated its objection to the requirement that the tests be conducted under the supervision of the Administrator. It further objected to the possibility that the phrase "representative number of flights into en route airports, as approved by the Administrator", might be subject to differences in understanding, and result in the certificate holder being required to fly a greater number of hours than presently required, over greater distances, and over routes where operations are not initially planned.

On behalf of helicopter operators, the ATA suggested that since helicopter operations by a certificate holder are typically conducted over short route segments and at a limited number of stations, accomplishment of proving tests for helicopters should be based on a limited number of entries into a station rather than on time, and that the deviation authority provided for in § 127.17(b) should therefore remain unchanged.

The Airline Pilots Association (ALPA) supported the proposed amendments insofar as they provide for elimination of the requirement for conducting proving tests over authorized routes and require that flights into a representative number of en route airports be made with helicopters as well as airplanes. It comments, however, that proving tests ought to be conducted under the most realistic of operational conditions during which day-to-day problems such as servicing, ground operation, approach and departure, runway lengths, takeoff and landing weights, etc., as they relate to new equipment, can be evaluated. The ALPA further objected to the suggestion contained in the Notice that flight training, publicity and advertising activities, and delivery flights might be combined with proving test activities and unduly interfere with the primary purpose of proving the aircraft.

With respect to the objection by the ATA that the requirement for conducting proving tests under the "supervision" of the Administrator was retained in the Notice, it is the FAA's belief that evaluation of the combined performance and functioning of the aircraft, airmen, and the certificate holder in day-to-day operational situations prior to entering into regular service is essential to flight safety. This is the Administrator's single opportunity to make the necessary preliminary determination that the certificate holder can operate the new equipment with the high standard of safety required by the Federal Aviation Act. However, on reconsideration, the word "observation" has been substituted for the word "supervision" in all places where it appeared in the rule, since the FAA's function and purpose in this instance is not to *supervise* or *direct*, but rather to *observe* and *evaluate*. In this sense, it is essential that a representative of the Administrator be in the aircraft to make the observation and evaluation.

With respect to the objection that the requirement for "a representative number of flights into en route airports as determined by the Administrator" may result in difficulties resulting from differences in interpretation, it should be noted that this provision will allow for some flexibility in planning and conducting the aircraft proving program, depending upon circumstances which may be peculiar to individual test programs, and that Regional personnel will be guided in the exercise of this discretion by FAA policy materials furnished to them. It is anticipated that this element of flexibility will result in more efficient and effective aircraft proving tests.

As previously indicated, the ATA expressed the view that proving tests for helicopters should be based on entries into a limited number of heliports rather than on the accumulation of a specified amount of flight time, by reason of their operation over typically short route segments, and that the provision for deviations now contained in § 127.17(b) should be retained to allow for this difference. The ALPA, on the other hand, commented that helicopters should make proving flights into all authorized en route airports. We do not completely agree with the views expressed by either the ATA or the ALPA. In the opinion of the FAA, an adequate measure of flexibility in the conduct of proving tests is afforded by allowing for the representative selection of airports. In addition, retention of the uniform time requirement for helicopters and airplanes is a judgment made in the interest of safety and based on experience gained in helicopter operations. Furthermore, the recognized differences between helicopter and airplane operations are not considered so significant as to allow for abbreviation of the minimum hours of proving tests required for helicopters.

The ALPA expressed concern that training flights, publicity activities, and delivery flights conducted in conjunction with proving flights might unduly interfere with the tests. In this regard, it should be pointed out that, while the rule does not prohibit such activities, to the extent that these activities were more than ancillary to the proving test, or actually interfered with the primary purpose of proving that the aircraft can be operated safely under operational conditions and situations, the flight could not be considered as a proving test.

In consideration of the foregoing, Parts 121 and 127 of the Federal Aviation Regulations are amended effective August 18, 1968.

These amendments are made under the authority of sections 313(a), 601, and 604 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, and 1424).

Amendment 127–9

Critical Rotorcraft Components

Adopted: September 10, 1968 **Effective: October 17, 1968**

(Published in 33 F.R. 14104, September 18, 1968)

The purpose of these amendments to Parts 21, 27, 29, 43, 45, 91 and 127 of the Federal Aviation Regulations is to (1) permit rotorcraft manufacturers to adopt failsafe fatigue design practices for certain portions of the flight structure on condition that related fatigue crack detection procedures and inspection intervals are approved under the required fatigue evaluation as part of the type design and placed in a separate section of the rotorcraft maintenance manual, (2) require that the replacement times of certain critical components be similarly approved and placed in the separate section of the maintenance manual, (3) require that this section of the manual be referenced by placard in the rotorcraft, and (4) specifically require operators and maintenance personnel to comply with this section of the maintenance manual. The amendments will also require manufacturers to make certain revisions of the rotorcraft maintenance manual available to operators and require identification of certain critical components.

These amendments are based on a Notice of Proposed Rule Making (Notice No. 67–44) published in the Federal Register on October 11, 1967 (32 F.R. 14106).

A number of comments were received in response to Notice No. 67–44, most of which were in agreement with the proposal. The more pertinent of the comments that raised questions together with the changes in the proposal resulting therefrom are discussed hereinafter.

In view of the new sections that were proposed, one commentator suggested that existing §§ 27.307(a) and 29.307(a) be clarified by indicating that the structural analysis used in connection with proof of structure, be permitted to be either static or fatigue. The FAA agrees that such a change would more fully express the intent of the rule yet not imply a change in past practice in which fatigue evaluation has generally involved testing. The sections have been amended accordingly.

As previously stated in the preamble of the Notice, the standards of new §§ 27.571, 29.571, 27.1529 and 25.1529 are intended to preserve the design objectives stated in Notice 65–42, Airframe Proposal 8, except for clarifying changes.

One commentator stated that use of the word "component" in the proposed §§ 27.571 (a) and 29.571(a) could be interpreted as meaning that the entire fuselage, for example, and most of its elements are critical so that a formal fatigue evaluation would be required to be performed on each frame, stringer, panel, or combination. However, since not all parts of a flight structure, such as the fuselage, are likely to be critical in fatigue, it was suggested that the requirement be clarified to call for evaluation only of those considered critical. The FAA is in substantial agreement for it was not intended to require detailed evaluation of a portion of the structure for which no significant fatigue loading exists. The paragraph has been amended, therefore, to delete the word "component" and indicate that it is the critical portion of the flight structure that must

be identified and evaluated. A further recommendation that the paragraph be amended to be applicable to failures which "would" be catastrophic rather than those which "could" be catastrophic has been rejected since this would imply that doubtful areas need not be included in the fatigue evaluation. In connection with the requirement for fatigue evaluation of flight structure, it was suggested that the intent be clarified so as not to extend the fatigue evaluation to non-critical parts. While the FAA agrees with the objective of this comment, it is believed that the revisions to § 27.571(a) and § 29.571(a) discussed above sufficiently delineate the applicability without introducing the new term "noncritical".

As they were proposed, §§ 27.571(a)(3)(i) and 29.571(a)(3)(i) indicated that loads and stresses need be subjected to inflight measurement only throughout the range expected in operation where such range is less than the range of design limitations stated in §§ 27.309 and 29.309. It is apparent that such a generally stated alternative is at variance with other requirements inasmuch as design weight, rpm, airspeeds, and c.g., limits are attainable without extreme maneuvers and are, in general, explored in other phases of the flight test program. With maneuvering load factors, the situation is otherwise, however, and since it would be unrealistic in connection with fatigue evaluation to require measurement of loads and stresses at the limit maneuvering load factors, the alternative of using operational rather than design limits would there be applicable. To remove any ambiguity with reference to weight, rpm, airspeed, and c.g. limits, §§ 27.571(a)(3)(i) and 29.571(a)(3)(i) have been reworded to make it clear that it is for only maneuvering load factors that inflight measurements may be made with reference to values expected in operation.

The FAA agrees with a comment that the intent of §§ 27.571(d)(2) and 29.571(d)(2) is to distinguish the lesser of the limit and maximum attainable loads rather than designate one as being applicable. The parenthetical expression in the two sections has been amended to state "whichever is less".

Pointing out that some procedures are so simple and well known that actual demonstration should not be required, one commentator objected to the requirement that all procedures in the "Airworthiness Limitations" section of the Rotorcraft Maintenance Manual be shown to be practicable. Since the need for an actual demonstration should be determined on an individual basis, the requirement for a showing has been eliminated in §§ 27.1529(a)(2)(ii) and 29.1529(a)(2)(ii).

One of the comments received in response to the Notice requested that the FAA specifically countermand the "administrative procedures" specified in the preamble. In this connection, the commentator referred to the preamble discussions in which the FAA indicated that if safety requires that the airworthiness limitations in the Rotorcraft Maintenance Manual must be made more severe, appropriate changes to the manual would be made by airworthiness directives. While the comment objected to the general use of airworthiness directives, it did indicate acceptance of telegraphic airworthness directives for use in this regard.

As pointed out in the preamble to Notice 67–44, the inspection intervals, replacement times and related procedures set forth in the "Airworthiness Limitations" section of the Rotorcraft Maintenance Manual are limitations on the original approval of the type design. Thus, any changes to these limitations are, in effect, changes to the type design. In recognition of this fact, airworthiness directives have long been used by the FAA to prescribe changes to the service life limits for a product. However, it should be made clear that since the replacement times, inspection intervals, etc., would now be placed in a maintenance manual, the manufacturer's changes to the manual and subsequent dissemination to all operators would serve the purpose originally served by airworthiness directives. However, as the FAA pointed out in the preamble discussions, in those instances where a safety necessity exists, the airworthiness directive is the means by which the FAA can assure that the operators have the revised limitations. Moreover, an airworthiness directive would also be required in those instances in which a manufacturer failed to issue revisions to the limitations which the FAA considered necessary in the interest of safety. Only in the latter instance would the FAA make changes to the manual by airworthiness directive. As the commentator correctly noted, approved revisions to the airworthiness limitations section of the maintenance manual have had the same legal effect as the original limitations and the issuance of airworthiness directives with respect to such limitations would not be inconsistent with that fact.

The FAA agrees with one final suggestion that service experience may be used in certain instances in a resubstantiation of the flight structure, as, for example, for a relaxation of a replacement time or inspection interval in the "Airworthiness Limitations" section of a Rotorcraft Maintenance Manual. It must be recognized, of course, that time extensions for parts, the failure of which would be catastrophic, cannot be based solely on failure rates or absence of failures in service. However, it is intended to permit appropriate use of service experience in reevaluating flight structure in accordance with §§ 27.571 and 29.571. In this connection, laboratory tests might be made on parts that have been used in service to determine whether the original assumptions were overly conservative.

Interested persons have been afforded an opportunity to participate in the making of this amendment, and due consideration has been given to all matter presented.

In consideration of the foregoing, Parts 21, 27, 29, 43, 45, 91,* and 127 of the Federal Aviation Regulations are amended effective October 17, 1968.

This amendment is made under the authority of sections 313(a), 601, 603, 604, and 605 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, 1423, 1424, and 1425).

*Parts 21, 27, 29, 43, 45, and 91 are published separately.

Amendment 127–10

Carriage of Narcotic Drugs, Marihuana, and Depressant and Stimulant Drugs by Aircraft

Adopted: August 27, 1969 **Effective: September 5, 1969**

(Published in 34 F.R. 13922, August 30, 1969)

The purpose of these amendments to the Federal Aviation Regulations is to prevent the hazardous operation of aircraft by prohibiting the carriage by aircraft of narcotic drugs, marihuana, and depressant and stimulant drugs under certain limited conditions.

These amendments were proposed in Notice 69-32 and published in the Federal Register on August 5, 1969 (34 F.R. 12713). Under the Notice the FAA proposed:

(1) that violation of the prohibition against carriage be a basis for denying applications for pilot, flight instructor, flight engineer, and flight navigator certificates, and for the suspension or revocation of those airman certificates or of the operating certificates issued under Parts 121, 123, 127, and 135;

(2) a requirement for the filing of a flight plan on all flights between Mexico and the United States;

(3) that conviction for violation of the statutory provisions concerning the prohibited items is also grounds for denying, suspending or revoking those airman certificates.

Two requests were received in response to the proposal for extension of the comment period, and these requests were denied because the public interest considerations involved in this rule required final rule making action at the earliest possible time. Public comments with respect to the substance of the rule were received from five sources. All of them expressed concern that as proposed § 91.12(a) would make the aircraft operator a violator even when he does not know of the presence on board the aircraft of a proscribed article. In response to these comments the prohibition against carrying the proscribed items in § 91.12(a) has been clarified to make it a violation of that section only when the operator of the aircraft has knowledge that the aircraft is carrying the proscribed articles. One of the comments urged that additionally the rules should not be applied to air carriers who frequently carry narcotics and other drugs lawfully in their operations. In response to this comment § 91.12(b) has been changed by inclusion of a new paragraph (b) which excepts all lawful carriage.

Another of the comments questioned the legal basis for the adoption of the rule as a safety rule. As stated in the preamble to Notice 69-32, the provisions contained in this rule are necessary to meet and avoid the increasing hazards to safety in air commerce

resulting from the increasing use of aircraft for the illicit carriage of narcotics and other drugs into the United States and Mexico. These hazards result from attempts to avoid detection or pursuit by violent maneuvers, low flying, and other extremely dangerous flight techniques, including the use of unsafe landing areas.

In the interests of clarity and conformity with judicial opinions, the phrase "final conviction" has been used in lieu of "conviction" in §§ 61.6(a) and 63.12(a). Finally, editorial and other nonsubstantive changes have been made for the purposes of clarity and continuity.

Interested persons have been afforded an opportunity to participate in the making of these amendments. Due consideration has been given to all matter presented. In other respects, for the reasons stated in the preamble to the Notice, the rule is adopted as prescribed herein.

Since the public interest requires that these amendments be made effective as quickly as possible, I find that good cause exists for making them effective on less than 30 days' notice.

In consideration of the foregoing, Parts 61, 63, 91, 121, 123, 127 and 135* of the Federal Aviation Regulations are amended, effective September 5, 1969.

These amendments are made under the authority of sections 307(c), 313(a), 601, 602, and 604 of the Federal Aviation Act of 1958 (49 U.S.C. 1354, 1421, 1422, 1423, 1424), and of section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

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* Parts 61, 63, 91, 121, 123, and 135 are published separately.

Amendment 127–11

Maintenance and Re-establishment of Pilot Qualifications

Adopted: August 28, 1969 **Effective: October 5, 1969**

(Published in 34 F.R. 14069, September 5, 1969)

The purpose of this amendment to Part 127 of the Federal Aviation Regulations is to increase the period within which a pilot must make a trip between heliports on a route in order to remain qualified to fly that route. In addition, the amendment prescribes different periods according to whether the helicopter is single-engine or multi-engine.

This amendment was proposed as a notice of proposed rule making issued as Notice 68–38 and published in the Federal Register on January 8, 1969 (34 F.R. 264). In Notice 68–38 it was also proposed to make an editorial revision of § 121.447 of the Federal Aviation Regulations Part 121 to make it consistent with this amendment to Part 127. However, the Federal Aviation Administration has undertaken the preparation of another notice of proposed rule making that will propose certain substantive changes in the provisions of Part 121 which will eliminate the need for making the editorial revision to § 121.447 proposed in Notice 68–38. Accordingly, that portion of the Notice which proposed to amend § 121.447 is hereby withdrawn.

Withdrawal of this notice of proposed rule making as to Part 121 constitutes only such action, and does not preclude the Federal Aviation Administration from issuing another notice in the future, nor commit the Federal Aviation Administration to any course of action in the future. This withdrawal shall become effective upon publication in the Federal Register.

Under present § 127.181 after becoming qualified on a particular route, a pilot in command must make at least one trip as pilot or other member of a flight crew between terminals into which he is scheduled to fly each 90 days to maintain route qualification. If a pilot is absent from a route for more than a 90-day period, he must re-establish his qualifications under § 127.179. The 90-day period was established when scheduled helicopter air carriage was a new mode of transportation. Most operations were conducted with single-engine helicopters; and criteria for routes, obstruction lighting, and emergency landing sites were being developed. Today, engine reliability has improved, multi-engine helicopters are operated on many routes, and some helicopters are equipped for

IFR flight and can navigate without ground reference. Experience has shown that the number of emergency landings has been less than anticipated. Many carriers operate several routes in a small area, and through the proper use of operations notices required by § 127.203 a pilot can remain familiar with weather characteristics, navigation facilities, terrain, congested areas, and communication procedures in the area even though he may not have made a trip on a particular route for some time.

This amendment increases the period within which a pilot must make a trip to remain qualified on a route from 90 days to 12-calendar months if he is scheduled to fly a multiengine helicopter. In view of the greater possibility of forced landing in a single-engine helicopter and the resulting need for greater rule familiarity in single-engine helicopter operations, the present 90-day period is increased to 6-calendar months for single-engine helicopter operations.

In addition, this amendment makes an editorial change by deleting the word "terminals" and inserting the word "heliports." The purpose of this change is to make the language of § 127.181 consistent with § 127.179 to which it refers. Further, the change will clarify § 127.181 by replacing a word which is not defined by the regulations with one that is defined.

Finally, the amendment clarifies paragraph (a) of § 127.181. At present, § 127.181(a) when read alone appears to allow an air carrier to schedule a pilot as pilot in command on a route at any time after initial route qualification if he has made a trip as a pilot or other flight crewmember over the route within a specified period before the day on which he is scheduled to fly. However, when read in conjunction with paragraph (b) of this section, it is apparent that a pilot cannot become eligible for use on a route merely by riding the route as a pilot or other flight crewmember other than pilot in command if there has been any period, of the length specified, during which he has not maintained his route qualification. This amendment makes it clear that a pilot must make at least one flight in each 6 or 12-month period, as specified, to maintain route qualification and he must maintain route qualification, or re-establish his qualification, to be eligible for use on the route.

Interested persons have been afforded an opportunity to participate in the making of this amendment (34 F.R. 264), and due consideration has been given to all relevant matter presented.

In consideration of the foregoing, Part 127 of the Federal Aviation Regulations is amended, effective October 5, 1969.

This amendment is made under the authority of sections 313(a), 601 and 604 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421 and 1424), and section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

Amendment 127–12

Content, Form, and Disposition of Maintenance and Related Records

Adopted: September 8, 1969 **Effective: October 16, 1969**

(Published in 34 F.R. 14424, September 16, 1969)

The purpose of these amendments to Parts 43, 121, and 127 of the Federal Aviation Regulations is to remove from Part 43 the requirements concerning the content, form and disposition of maintenance and related records for the certificated air carriers and the commercial operators of large aircraft and to set forth such requirements in Parts 121 and 127, as applicable. In addition, these amendments revise the recording requirements for major repairs and major alterations and eliminate the requirement that for retired aircraft those records must be retained past the date of cancellation of the registration certificate.

These amendments are based on a notice of proposed rule making (Notice 68–35) published in the Federal Register on December 20, 1968 (33 F.R. 19026). While the comments received in response to the Notice generally concurred with the proposal to transfer the maintenance recording requirements and the recordkeeping requirements

from Part 43 to Parts 121 and 127, a number of comments were directed to the substance of those proposed requirements. Except for minor editorial changes, and except as specifically discussed hereinafter, these amendments and the reasons therefor are the same as those contained in Notice 68-35. This rule making action primarily involves a relocation of existing regulations. However, the FAA now has under study detailed amendments designed to update the recordkeeping requirements of Parts 121 and 127 of the Federal Aviation Regulations.

One comment pointed out that throughout the proposal and in the present regulation, liberal use is made of the word "all" as in "all maintenance," "all records," etc., and requested that the word "all" either be deleted or changed to "all meaningful" since "all," interpreted literally means everything. The word "all" in the proposal was intended to be all inclusive and it was used in order to clarify, but not to change, the existing rules. The proposal clearly stated the requirement that a record must be made of all maintenance. The substitution of the words "all meaningful," would, therefore, not be appropriate since it would not express the requirement intended by the FAA. The commentator also suggested that the term "rebuilding" be defined in Part 1 of the regulations. In that connection, it should be noted that the FAA has proposed such a definition in Notice 69-10, which was published in the Federal Register on March 20, 1969 (34 F.R. 5440). In addition, the commentator noted that proposed §§ 121.380 and 127.141 require a record of all maintenance, rebuilding, and alteration on aircraft (including airframes, aircraft engines, propellers, appliances, or part thereof), but that the words "or part thereof" do not appear in the related provisions in proposed §§ 121.698 and 127.308. This was an oversight in drafting the proposal and for the purpose of consistency and clarity, the related provisions in the amendments to §§ 43.9(b), 121.698, and 127.308, have been revised accordingly.

In the notice it was proposed to specifically require that a record be made of all airworthiness directive (AD) compliance. One comment stated that since maintenance, as defined in Part 1, includes inspection and repair and since maintenance and alteration records are already required to be made, a requirement for the preparation of records showing compliance with ADs is redundant. The FAA agrees and the proposed amendments have been changed to remove the requirement for such records.

The notice also proposed to add new §§ 121.698(a)(1) and 127.308(a)(1) to require that the record of each major repair and major alteration, and each rebuilding required by §§ 121.380 and 127.141 be retained until such work is "superseded by like work" or until the product on which the work was performed is sold or retired. One comment objected to the phrase "superseded by like work" and stated that the words "repeated or superseded by other work" are more descriptive and the term "other" would include "like." Moreover, it was suggested that the use of the term "other" would cover the situation of a work content change which would still supersede the previous work. The FAA agrees and since this same language is used in other provisions of the proposal, the requirement has been revised as suggested. With respect to this same requirement another commentator stated its belief that the proposal could be broadly construed to eliminate former records of work on components that are not affected by "like work" on the larger portion of the airframe, and that this could destroy the complete history of an appliance or of a subsystem and preclude a complete review of an individual system at any time. The current regulations do not require the retention of the complete history of any appliance or subsystem of the aircraft, and such a requirement was not proposed in Notice 68-35. Sections 121.698 and 127.308, as adopted herein, make it clear that the record of maintenance on an appliance must be retained until that maintenance is superseded or repeated by other work, either to the appliance or, as the commentator states, to "a larger portion of the airframe."

One comment objected to the proposed amendments requiring that certain maintenance and alteration records be retained for one year after the product on which the maintenance or alteration was performed is placed in service. The comment pointed out that the rule now specifies one year from the date the product was approved for return to service and that this change will require expensive and unnecessary data changes. The comment further noted that parts that are approved for return to service and are placed in stock are tagged as to whether or not they are serviceable and this includes a date upon which they were approved for return to service. Upon further

consideration, the FAA agrees that the term "placed into service" does not clearly indicate the objective of the requirement. However, because of the confusion in the past over the meaning of the requirement in the present regulation, it is not considered appropriate to continue using the term "approved for return to service" in connection with record retention requirements. As the comment indicates, the present rule has been administered so that the one year retention period starts when the specified maintenance or alteration is performed. This is what the FAA intends and the proposed regulation has been changed accordingly.

One commentator recommended that in lieu of requiring, as proposed in §§ 121.689 (a)(2) and 127.308(a)(2), that records of the "last complete overhaul" of airframes, engines, and propellers be retained, that the records of "each last completed work element of the approved overhaul program" should be retained. The commentator indicated that it did not intend that its recommendation change the rule, but that it was for the purpose of clarification of the requirement for retention of "block overhaul" records. The FAA does not agree that the suggested change would be as clear or as understandable as the proposal. The record of the "last complete overhaul" would include all the records necessary to show a complete overhaul of airframe, aircraft engine, propeller, or appliance irrespective of whether the overhaul program established by a particular certificate holder provides for overhauling the entire airframe, aircraft engine, propeller, or appliance at the same time or provides for overhauling them "in blocks" or at different times. As pointed out by the commentator, the work content in the various blocks is constantly changing and an item of work may not be repeated in the same block. When this occurs or the air carrier changes from one type overhaul program to another, proper record adjustments must be made to ensure that the last overhaul record of these items is retained. The retention of the "last completed work element of the approved overhaul program" would not convey the intent of the regulation.

One comment objected to proposed §§ 121.698(b) and 127.308(b) insofar as they retain the present requirement for a record of the last overhaul of appliances, and increase to two years the present one year record retention requirement for all maintenance and minor alteration records. The commentator stated that records of overhaul work accomplished over two years ago and records of maintenance and alterations performed more than one year ago have no real use. The FAA does not agree that for appliances the record of the last overhaul has no real value after two years. However, upon further consideration of the proposed two-year retention requirement, the FAA has determined that appliances should be treated the same as airframes, aircraft engines, and propellers. In this connection, it should be noted that with respect to major repairs and major alterations, the proposal would have required retention only for two years. The FAA does not now consider that such a change would be in the interest of safety. In view of the comments received, the proposed amendments concerning the retention of appliance records have not been adopted. Instead, the appliance record retention requirements have been incorporated into the requirements applicable to airframes, aircraft engines, and propellers. As now written the regulation is substantially the same as the current requirement. Records of minor repair and minor alteration for appliances need only be kept for a maximum of one year and records of major alterations and major repairs must be retained until they are repeated or superseded by other work or the appliance is sold or retired.

One of the comments strongly urged that the amendment not require the transfer of appliance maintenance records when an appliance is sold. The commentator recommended that the records be kept by the seller for a specified time and made available, upon request, to the new owner or operator. The FAA does not agree. While the FAA recognizes that the recording system which an air carrier elects to use may be such that it is inconvenient and time consuming to assemble the records in the form requested by the new owner, the FAA is nevertheless aware that it is necessary in the interest of safety to provide the new owner or operator with all the maintenance and appliances records necessary for the proper maintenance of its aircraft without delay.

The proposed §§ 121.380(c) and 127.141(c) permit the transferee of records to elect to receive "electronic data processing" records in coded form. However, the FAA has now determined that there are coded records other than electronic data processing records that may be used and the proposal has been revised to cover any coded records.

In consideration of the foregoing, Parts 43, 121 and 127 of the Federal Aviation Regulations (14 CFR 43, 121 and 127) are amended, effective October 16, 1969.

These amendments are made under the authority of sections 313(a), 601, and 605 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, and 1425), and of Section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

NOTE.—The recordkeeping and reporting requirements contained herein have been approved by the Bureau of the Budget in accordance with the Federal Reports Act of 1942.

Amendment 127–13

Additional Operating Rules Applicable to Operations for Compensation or Hire With Small Aircraft

Adopted: November 26, 1969 **Effective: April 1, 1970**

(Published in 34 F.R. 19130, December 3, 1969)

The purpose of these amendments to Parts 91, 121, 127, and 135 of the Federal Aviation Regulations is to establish certain additional operating requirements for air taxi and commercial operators conducting operations with small aircraft under Part 135, and to require that persons holding certificates issued under Parts 121 and 127 conducting operations with small airplanes conduct those operations in accordance with Part 135.

These amendments are based on a Notice of Proposed Rule Making issued as Notice 69–4 and published in the Federal Register on January 30, 1969, (34 F.R. 1443).

Interested persons have been afforded an opportunity to participate in the rule making through submission of written comments. Due consideration has been given to all relevant matter presented.

Numerous comments were received in response to the Notice. Based upon these comments and upon review within the FAA, a number of changes have been made to the proposed rule. Many of these changes involve rewording and reorganization for clarity and consistency. The final amendments, pertinent comments, and the more significant changes from the Notice are discussed in the order in which they were proposed in the Notice.

Operation of small airplanes and helicopters by Parts 121 and 127 certificate holders. This amendment provides for temporary continued effectiveness of existing operations specifications authorizing persons holding certificates issued under Parts 121 and 127 to conduct operations in small aircraft under Part 135 until new operations specifications are issued. Specifically, it will be noted that operations specifications authority to operate small aircraft under Part 135 expires on May 31, 1970, unless the certificate holder applies before that date for new specifications authority.

The Notice proposed to apply § 121.9 only to small airplanes, thereby removing small helicopters from its coverage. It is the intent of this amendment to require persons holding certificates issued under Part 121 or 127 to operate small helicopters in accordance with § 121.13 or Part 127, as appropriate, unless the Administrator finds that safety in air transportation and the public interest allow the operation of small helicopters under Part 135 in a particular case. Accordingly, § 121.13 has been changed by adding a new paragraph (d), that provides for operating small helicopters under Part 135, in accordance with appropriate operations specifications authority, if the Administrator finds that safety in air transportation and the public interest allow it.

Section 121.27 presently contains a provision for the issuance of deviations from the rules of Part 121 applicable to operations conducted by domestic air carriers in small airplanes. This amendment deletes that provision, since under the rules adopted herein, all domestic air carrier operations in small airplanes will be required to be conducted under the provisions of Part 135.

Applicability of Part 135. The Notice proposed to broaden the applicability of Part 135 to accommodate certificate holders under Parts 121 and 127 operating small airplanes. However, such an amendment to the applicability provisions of Part 135 is unnecessary,

since the applicability of the operating rules in Part 135 to Parts 121 and 127 certificate holders operating small aircraft is provided for in Part 121 by §§ 121.9 and 121.13, and in Part 127 by § 127.5, as amended herein.

Duration of ATCO certificates. Under this amendment, each ATCO certificate in effect immediately prior to the effective date of the amendment expires on May 31, 1970, unless the holder thereof applies for a new certificate and operations specifications before the expiration date. The amendment permits the certificate holder to continue operations, under the operations specifications and rules of Part 135 in effect immediately prior to the effective date of the amendment, until May 31, 1970, or if application for a new certificate is made, until a new certificate and operations specifications are issued or the application is denied.

Contents of operations specifications. The Notice proposed to amend § 135.13(b)(2) to broaden the contents of the operations specifications to include a list of the types of instrument approach procedures authorized and a list of aircraft required to be inspected in accordance with an approved aircraft inspection program. The proposed listing of instrument approach procedures has not been adopted. The FAA agrees with comments pointing out that the authorization of types of procedures is meaningful only if related to specific aircraft or pilots. It should be noted that § 135.131 requires a demonstration of those instrument approach procedures which the pilot is authorized to conduct.

The proposed listing of aircraft to be inspected in accordance with an approved aircraft inspection program is clarified by requiring those aircraft to be listed by registration number.

The proposed amendment to § 135.15 contained a statement that an air carrier or commercial operator holding a certificate under Part 121 or 127 is not eligible for a certificate under Part 135. Although an air carrier certificated under Part 121 or 127 may conduct operations in small airplanes in accordance with the rules of Part 135, it is excluded from the classification of air carriers designated as "air taxi operators" by the rules of the Civil Aeronautics Board (CAB) and, therefore, is not eligible to hold an ATCO certificate. In view of the fact that it is the rules of the CAB that make an air carrier ineligible for an ATCO certificate, the proposed statement of ineligibility with respect to persons holding air carrier certificates is considered unnecessary and is, therefore, not adopted in this amendment.

However, with respect to persons holding commercial operator operating certificates issued under Part 121, this amendment retains an eligibility requirement. In the past, the FAA has found that only on rare occasions or in special circumstances can an applicant show that his contract business conducted under Part 121 in large aircraft would not result directly or indirectly from his holding out as a common carrier in his air taxi operations. As amended, § 135.15 requires that a person holding a commercial operator operating certificate issued under Part 121 must, in order to obtain an ATCO certificate, show that his proposed operations will not result in common carriage operations conducted with large aircraft operated under Part 121. Of course, he may conduct commercial operations in small airplanes, as provided by § 121.9, by obtaining appropriate operations specifications authority.

Notification of establishment or change of location of business office or operations base. As amended, § 135.41 has been changed from the Notice to allow operations from temporary operations bases without notifying the District Office. The notification requirement is not intended to apply to operators who establish a temporary operating base until a construction job is completed within operating range and then move on to another temporary operations base or return to their home base. However, such operators must give notification before changing the location of any business office.

Briefing of passengers. In response to numerous comments, the method of briefing passengers before flight has been changed from the oral briefing proposed in the Notice to allow other kinds of briefing such as printed cards and to avoid unnecessary repetition of an oral briefing before each flight when the same passengers are carried on several flights in the same aircraft on the same day. As adopted § 135.81 requires the pilot to ensure that each passenger is familiar with the briefing information before takeoff.

Limitations for operations in icing conditions. Section 135.85(d)(3) has been changed from the Notice to include airplanes certificated in accordance with Special Federal Aviation Regulation No. 23 in the list of airplanes in paragraph (d) of that section.

Some comments contended that proposed paragraph (e) of § 135.85 would allow a pilot to ignore forecast icing conditions; other comments recommended deleting the prohibitions against flying into forecast icing conditions. The amendment is intended to allow for changing weather conditions that obsolete a forecast before the next forecast is issued. The proposal as adopted herein has been revised for purposes of clarification.

Pilot in command qualifications. The proposal that pilots operating VFR must have a minimum of 500 hours of flight experience and hold an instrument rating received the greatest number of comments in response to the Notice. It appears that a substantial number of air taxi pilots do not hold instrument ratings and the adoption of the proposed instrument rating requirement would create an unnecessary burden on air taxi operators that is not supported by past operating experience. An examination of records of accidents involving aircraft operated by ATCO certificate holders reveals that of 11 fatal accidents involving VFR flights into instrument conditions during an 18-month period, nine of the pilots held instrument ratings and during that period no pilots with less than 500 hours had any fatal accidents in ATCO operations. On the basis of this review of the accident statistics, the FAA has determined to make no change in the present pilot qualification requirements for day or night VFR flight. As proposed in the Notice and as adopted herein these requirements apply to all flights regardless of whether or not passengers are carried.

Pilot in command qualifications: IFR flight. Section 135.125, as adopted herein, contains the pilot in command qualifications for IFR flight proposed in § 135.121(a) of the Notice.

Deletion of § 135.129. Section 135.129 is deleted as proposed in the Notice.

Manual requirements. Section Number 135.27 is assigned to Item 15 of the Notice. Section 135.27 is changed to provide authority for granting a deviation from the manual requirement where the operation is so small that a manual is not a necessary management device for the orderly and safe conduct of operations. In addition to the single-pilot-owner operation, some organizations may have no need for all or part of the manual because of the limited size and kind of their operations.

Section 135.27(b)(13) requires that those certificate holders who have a manual and an approved inspection program include the program in the manual.

Recordkeeping and administrative controls. Section Number 135.43 is amended to include Item 16 of the Notice. The load manifest requirement is changed from the Notice to apply only to multiengine aircraft for which a crew of two pilots is required for all Part 135 operations. This would include aircraft with a passenger configuration for more than nine passengers and aircraft that are required to have a crew of two pilots by their operating limitations. Weight and balance procedures for aircraft other than those to which § 135.43(c) applies are covered in the manual, when a manual is required, and the training program.

The information required to be contained in the load manifest concerning the weight and balance of the loaded aircraft is changed from the Notice to simplify the manifest and the retention period for the manifest is changed from the proposed 3 months to 30 days.

Training of employed certificated mechanics. Item 17 of the Notice is not adopted. The purpose of the proposal in Item 17 was to ensure that no certificate holder uses the services of any person for supervision or approval of maintenance or alterations who has not satisfactorily performed the work concerned at an earlier date. This limitation on the privileges of a certificated mechanic is currently contained in § 65.81 of Part 65 of the Federal Aviation Regulations and § 135.33 prohibits a certificate holder from using the services of any person as an airman, which includes a mechanic, unless that person is qualified under the Federal Aviation Regulations. Accordingly, adoption of proposed Item 17 is considered unnecessary.

Compliance with types of instrument approach procedures authorized. Item 18 of the Notice is not adopted. As explained above, the proposal to require approval of types of instrument approach procedures in the operator's operations specifications has not been adopted. However, under § 135.138(b) as adopted herein each pilot will be required to demonstrate his ability to conduct each type of instrument approach procedure that he is authorized to use.

Flight locating requirements. Some comments suggested that flight locating requirements in Item 19 should not apply to contract operations in remote areas where flights are made from temporary bases. However, there is sufficient latitude in the provisions of

subparagraph (a)(3) of § 135.29 to permit compliance under those circumstances. Therefore, § 135.29, assigned to Item 19 of the Notice is adopted herein as proposed in the Notice.

Aircraft proving tests. Section Number 135.32 is assigned to Item 20 of the Notice. The proposal is changed: (1) to clarify what was meant by "type" in the Notice; (2) to provide for deviations from the specific hours of testing required in special circumstances; (3) to make the proving test requirements inapplicable to aircraft presently operated by a certificate holder under Part 135; and (4) to explain the phrase "materially altered in design."

Landing and takeoff distance limitations. Section Number 135.113 is assigned to Item 21 of the Notice and is adopted as proposed in the Notice.

Alcoholic beverages. Section Number 135.115 is assigned to Item 22 of the Notice. The rule as adopted herein contains the same language as that contained in Part 121 of the air carrier rules.

One comment requested that the requirement of § 91.7 that each required crewmember be at his station, with certain exceptions, be relaxed to permit the second in command to serve as a flight attendant during portions of the flight. When a two-pilot crew is required, it should function as a team, whether observing traffic in normal operations or handling emergencies. It is not in the interest of safety to have that team effort interrupted by cabin attendant duties that are not essential to the safety of the flight, such as serving food or beverages. Accordingly, § 91.7 will remain applicable to the second in command in operations under Part 135.

Carriage of cargo. Section Number 135.117 is assigned to Item 23 of the Notice. Section 135.117 has been changed from the Notice to allow the carriage of cargo behind passengers, but not directly above passengers. Many small airplanes have a "station wagon" configuration with no cargo bulkhead between a rear cargo area and the passenger seats. If the cargo is properly secured so as to eliminate the possibility of shifting under all normally anticipated flight and ground loads, the cargo may be carried behind the passengers. Other requirements for cargo location and security, as proposed in the Notice, must also be met. These requirements apply to cargo carried aboard any aircraft, regardless of whether or not passengers are carried. The rule has been drafted to clarify the three basic ways cargo may be carried; that is, (1) in approved racks, bins, or compartments installed in the airplane; (2) in accordance with the location and security requirements specified in paragraph (c); or (3) as otherwise approved by the Administrator. The third method is intended to cover situations involving nets, bins, and other devices not installed in the airplane, but available for use in a manner approved by the Administrator.

Flight and duty time limitations. Section Number 135.136 is assigned to Item 24 of the Notice. Due to the great diversity in the operations conducted under Part 135 and the attendant need for flight time limitations that will accommodate those different operations, the weekly, monthly, and annual flight time limitations proposed in the Notice are not adopted by this amendment. Instead, the daily or 24-hour duty time limitations are changed to provide: (1) that a pilot of an aircraft requiring only one pilot may not be assigned for more than 8 hours of duty during flight time in any 24 consecutive hours; (2) that a pilot of an aircraft required to have two pilots may not be assigned for more than 10 hours of duty during flight time in any 24 consecutive hours; (3) that flight crewmembers must be given at least 10 consecutive hours free from all duties in connection with operations under Part 135 during any 24-hour period; and (4) that in the event a pilot exceeds 8 hours of assigned flight time during any 24 consecutive hours, because of circumstances beyond his control such as adverse weather conditions, he must have at least 16 hours free from all duty in operations under Part 135 before he can be assigned to another flight. We believe the foregoing daily limitations will provide adequate flight time limitations. However, we intend to keep this matter under study and will conduct periodic surveillance of the industry to determine whether there is a need for further limitations.

The term "duty during flight time" has been substituted for "duty aloft" used in the Notice in response to requests to clarify the meaning of "duty aloft."

Since the certificate holder may not know the extent of a pilot's other commercial flying during any 24 consecutive hours, the pilot is responsible for not accepting an assignment that would exceed the flight time limitations.

Second in command for aircraft with more than 10 occupants. Section Numbers 135.52 and 135.53 are assigned to Item 25 of the Notice. The two-pilot requirement in the Notice was intended to apply to any aircraft capable of carrying 10 or more passengers and to apply whether or not passengers are carried or the seats are installed, so as to include passenger-cargo versions of aircraft capable of carrying 10 or more passengers. However, the rule as drafted in the Notice did not provide a clear identity of the aircraft to which the rule would apply, since it is not clear which aircraft are capable of carrying 10 or more passengers, except when the seats are installed. As adopted, the rule requires two pilots whether or not passengers are carried if more than nine passenger seats (excluding any pilot seat) are installed.

The FAA will continue to consider, as a future rule-making action, a two-pilot requirement for airplanes based on type certificated cargo and passenger-carrying capacity rather than the seating configuration. In the meantime, the two-pilot requirement is limited to that presently in the standard operations specifications held by some ATCO certificate holders. As drafted, the rule is intended to allow the operation of an 11-seat airplane with one pilot, provided only nine passenger seats are installed and the copilot seat is not occupied by any person other than those persons authorized by the regulation.

As adopted, the two-pilot requirement applies only to airplanes and not to all aircraft as proposed. Comments pointed out correctly that insofar as the proposal applies to helicopters, it exceeds the crew requirements for scheduled air carrier helicopter operations under Part 127.

Flight attendant crewmember requirement. Section Number 135.54 is assigned to Item 26 of the Notice. The proposed requirement for a flight attendant is changed in this amendment to apply to aircraft having a passenger seating capacity of 20 or more. This change is made in view of the requirement in Part 127 for a flight attendant in helicopters with a passenger capacity of more than 19 and in view of the second-in-command requirement.

Pilot and flight attendant crewmember training programs. Section Numbers 135.55 and 135.137 are assigned to Item 27 of the Notice. Section 135.55 is changed from the Notice by transferring the substance of the provisions of proposed paragraphs (b), (c), and (d) to § 135.137 because they pertain, more appropriately, to pilot testing. Other changes have been made to avoid adopting redundant requirements and to clarify the contents of the training program.

The proposed requirement that the training program contain the minimum time to be spent in completion of the curriculums has not been adopted in view of the variations in air taxi operations, qualifications of pilots, and aircraft used. It is considered preferable to require only that the program be adequate to ensure that each required pilot and flight attendant is adequately trained to meet the applicable knowledge and skill test requirements.

Initial and recurrent pilot testing requirements. Section Number 135.138 is assigned to Item 28 of the Notice. Questions have arisen as to the standard of performance to be met in demonstrating competence in the flight tests required by § 135.138. A general standard of competence is expressed in § 61.23 of this chapter. That standard is flexible enough to apply to differences in the levels of competence expected between private and commercial pilots. In contrast to that standard, the standard in § 135.138 to be applied in the case of pilots will require the pilot to be the obvious master of the aircraft with the outcome of the maneuver never in doubt. The result is to require a higher standard of performance in testing pilots under § 135.138 than is required for the issuance of a private or commercial pilot certificate or an instrument rating under Part 61 of the chapter.

Initial and recurrent flight attendant crewmember testing requirements. Section Number 135.139 is assigned to Item 29 of the Notice and is adopted as proposed.

Pilot-in-command qualifications for routes and airports. Section Number 135.122 is assigned to Item 30 of the Notice. Paragraphs (a) and (b) of Item 30 are not adopted; since the substance of these paragraphs is adequately covered by the testing requirements in § 135.138.

The words "in operations under this Part" have been added to paragraph (b) of § 135.122 to make it clear that the duties and responsibilities to be satisfactorily performed in the check are those of a pilot in command of an aircraft in operations under Part 135.

Emergency flotation means for over-water operation. It appears that the accident record does not support the proposed requirement in Item 31 of the Notice which would involve retrofitting many of the 10,000 or more aircraft used in air taxi operations. Accordingly, the proposal is not adopted.

It will be noted that § 91.33(b)(11) applies to all operations under Part 135 and requires approved flotation gear readily available to each occupant if the aircraft is operated beyond power-off gliding distance from shore. If, for example, a takeoff is made over water, the aircraft must at all times be in a position from which it can glide to the shore, all power off, maneuvering as necessary, unless flotation means are available.

Reporting of mechanical irregularities. Section Number 135.119 is assigned to Item 32 of the Notice and is adopted as proposed in the Notice.

Empty weight and center of gravity. Section Number 135.167 is assigned to Item 33 of the Notice. The rule proposed in Item 33 of the Notice has been changed by the addition of two exceptions to the requirement in § 135.167(a) that current empty weight and center of gravity calculations be calculated from values established by actual weighing of the aircraft within the preceding three years. One exception is made for aircraft originally certificated for airworthiness within the preceding three years. The other exception is for aircraft operated under a weight and balance system approved in the operations specifications of the operator.

In addition, the compliance date for § 135.167(a) has been changed to require compliance 12 months after the effective date of this amendment and application of the rule is restricted to multiengine aircraft.

Approved aircraft inspection program. Section Number 135.60 has been assigned to Item 34 of the Notice.

As adopted, a certificate holder may apply for an amendment to his operations specifications to allow him to have his aircraft inspected in accordance with an approved aircraft inspection program instead of the annual, 100-hour, or progressive inspection requirements of §§ 91.169 and 91.171. An inspection program may be submitted for approval by the Administrator for any make and model aircraft if the certificate holder has the exclusive use of at least one aircraft of that make and model. A separate inspection program must be submitted and approved for each different make and model aircraft that the certificate holder desires to have inspected in accordance with an approved aircraft inspection program. Each aircraft subject to an approved aircraft inspection program is listed in the certificate holder's operations specifications and may be operated by a certificate holder or any other person without an annual, progressive, or 100-hour inspection in any operation that would otherwise require those inspections, as long as as it is inspected in accordance with the approved aircraft inspection program. Section 91.169 of Part 91 is amended to exclude from the annual and 100-hours inspection requirements small aircraft that are inspected in accordance with an approved inspection program.

Section 135.60 also sets out procedures whereby the Administrator may amend the certificate holder's operations specifications to require certain aircraft to be inspected in accordance with an approved aircraft inspection program. Such an amendment of the operations specifications is governed by § 135.19 and the certificate holder may submit written information, views, and arguments concerning the proposed amendment and may petition the Administrator for reconsideration of such an amendment. Section 135.60 also prescribes requirements for approval of an aircraft inspection program and procedures for changes in the program, including procedures for reconsideration of any change requested by the Administrator.

Inasmuch as all certificate holders are not required to have a manual, a provision has been added for an approved aircraft inspection program manual.

Mechanical reliability reports. Section Number 135.57 has been assigned to Item 35 of the Notice. As adopted, § 135.57 is limited to multiengine aircraft. Provision has been made in paragraph (d) for delaying the submission of reports on aircraft operated in areas where mail is not collected.

Mechanical interruption summary report. Section Number 135.59 has been assigned to Item 36 of the Notice. Section 135.59, as adopted, is limited to multiengine aircraft. This amendment does not adopt proposed paragraph (b) in Item 36, which pertained to the number of engines removed prematurely.

Check pilot authorization. Section 135.135 is amended to make it clear that a check pilot's authorizations will be specified in terms of the kinds of tests he is qualified to give.

Second in command qualification. The point has been raised by air carriers operating under Part 121 that under Part 121 a second in command is not required to hold a category, class, or type rating appropriate to the aircraft on which he serves. These carriers have suggested that category, class, and type ratings not be required of a second in command who is subject to an approved training program conducted under Part 121. This suggestion is not adopted in this amendment. The completion of an approved training program should enable the second in command to pass a test for a rating. The flight test for a type rating may be given in conjunction with the testing portion of the operator's training program to avoid the cost of an additional flight test.

Some operators use the services of a second-in-command pilot when they are not required to do so by the regulations. Accordingly, § 135.127 is amended to require category and class ratings only when a second in command is required.

Autopilot: minimum altitude for use. Section 135.79(b) is amended to make it conform to the new Terminal Instrument Procedures (TERPS) terminology.

Airworthiness check. Section 135.67 is amended to include inspections under the approved inspection program. It will be noted that under § 135.27 the certificate holder must develop procedures for ensuring that the pilot in command knows that required airworthiness inspections have been made and that the aircraft has been approved for return to service in compliance with applicable maintenance requirements.

In consideration of the foregoing, Parts 91, 121, 127, and 135 of the Federal Aviation Regulations are amended, effective April 1, 1970.

These amendments are made under the authority of sections 313(a), and 601 through 610 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), and 1421 through 1430), and section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

NOTE.—The recordkeeping and reporting requirements contained in Notice No. 69-4 have been approved by the Bureau of the Budget in accordance with the Federal Reports Act of 1942. Since the recordkeeping and reporting requirements contained in the rules as adopted herein have been modified in response to comments submitted and are decreased from those proposed, prior approval by the Bureau of the Budget has not been obtained prior to their adoption.

Amendment 127-14

Pilot Qualification: Recent Experience

Adopted: December 30, 1969 **Effective: February 7, 1970**

(Published in 35 F.R. 310, January 8, 1970)

The purpose of this amendment to Part 127 of the Federal Aviation Regulations is to eliminate the requirement that multiengine helicopter air carrier pilots make two one-engine-inoperative proficiency landings in each 90-day period, and to provide that the proficiency landings be made in the type helicopter in which each pilot is to serve. The amendment was proposed in Notice 69-31 issued on July 30, 1969, and published in the Federal Register on August 5, 1969 (34 F.R. 12716).

Comments were received from the Air Transport Association and the Air Line Pilots Association, both expressing unqualified concurrence with the proposed amendment.

Section 127.175 as presently written requires a pilot in multiengine helicopter air carrier service to make at least two one-engine-inoperative landings in each 90-day period, and, if that pilot serves at night, at least one of those one-engine-inoperative landings must be made at night. This regulation was introduced when multiengine helicopters were inaugurated into air carrier service over six years ago.

Since that time, air carrier multiengine experience has been good. Occurrences of one engine becoming inoperative have been very few, and the dangers from one engine out have been shown to be negligible. Emergency procedures with one engine inoperative are not difficult, and there is little or no change in controllability or flight characteristics.

We believe air carrier multiengine experience has shown the requirement unnecessary for proficiency demonstrations of one-engine-inoperative approaches at 90-day intervals. This maneuver is required during the pilot's six-month proficiency check, and we believe this to be sufficient.

The amendment also removes the requirement for a night proficiency landing in a multiengine helicopter by a pilot scheduled to serve in air transportation at night. However, the initial training given each pilot as required by § 127.155 must include night takeoffs and landings, if night operations are authorized. In this regard the amendment makes Part 127 consistent with Part 121 of the Federal Aviation Regulations.

In addition, § 127.175 is amended to require that an air carrier pilot engaged in scheduled air transportation make his proficiency takeoffs and landings in each type of helicopter in which he is to serve. There is sufficient variety in the emergency procedures for each type that proficiency in specific safety techniques is essential. General proficiency may be attained in a variety of ways, but the public interest is best served by having each pilot proficient and current as to the safety techniques applicable to the particular type helicopter in which he regularly serves the public.

Interested persons have been afforded an opportunity to participate in the making of this amendment, and due consideration has been given to all relevant matter presented.

In consideration of the foregoing, Part 127 of the Federal Aviation Regulations is amended, effective February 7, 1970.

This amendment is issued under the authority of sections 313(a) and 601(a) of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a) and 1421(a)), and of section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

Amendment 127–15

Reporting Requirements for Manufacturers; Failures, Malfunctions, and Defects

Adopted: February 11, 1970 **Effective: April 2, 1970**

(Published in 35 F.R. 3154, February 19, 1970)

The purpose of these amendments to the Federal Aviation Regulations is to require manufacturers to report certain failures, malfunctions, or defects in the products or articles which they manufacture.

This action is based on the notice of proposed rule making set forth in Notice 69–12 and published in the Federal Register (34 F.R. 5441) on March 20, 1969.

Numerous comments have been received in response to Notice 69–12. While the majority of the comments were generally in favor of the proposed regulations, a number of comments recommended changes in specific provisions of the proposal. These comments are discussed in more detail hereinafter. There were also a few comments requesting that the proposal be withdrawn. While these comments are very general in nature, they appear to be primarily concerned with the belief that the proposed regulations are unnecessary and that the proposed system would not accomplish the stated objectives. The FAA, however, does not agree. Contrary to the opinion expressed in these comments, there are no current regulations that provide all the information covered under the proposal. While there may be other systems for obtaining the necessary failure, malfunction, or defect data that would be as effective as the system proposed, they are not apparent to the FAA at this time.

There were many comments objecting to the reporting time limit proposed in §§ 21.3 and 37.17. These comments were in general agreement that a 4-hour notification limit is unreasonably short since it would not permit the manufacturer time in which to investigate and adequately evaluate a failure, malfunction, or defect which has been "reported" to him. After further consideration, the FAA agrees. A manufacturer, prior to reporting to the FAA a failure, malfunction, or defect, should first confirm its occurrence and determine its effects through a preliminary investigation and analysis. Therefore, the final rule reflects the concern of these commentators and the notification period prescribed in §§ 21.3 and 37.17 is extended to twenty-four (24) hours.

Several comments were received which questioned the meaning of the words "imminent hazard to flight." It appears that these commentators are primarily concerned with the word "imminent" and with the difficulty in administering such a requirement. The FAA appreciates the concern expressed in these comments. As one commentator correctly indicated, the Notice related the information concerning failures, malfunctions, and defects which the FAA proposed to require the manufacturers to furnish, to the same such information the air carriers are currently required to report. Thus, the manufacturers should report any failure, malfunction, or defect that could result in a hazard to flight, without the necessity of deciding whether the hazard is an "imminent" one. The final rule has been revised accordingly.

In the light of the various comments and after further consideration, the FAA has decided that it would not be appropriate to prescribe a form on which manufacturers would be required to report under §§ 21.3 and 37.17. The FAA now considers that the manufacturers should report in the most expeditious manner using any method of communication available to them.

Comments were also received suggesting that the FAA should not be notified of a failure, malfunction, or defect until after the problem is solved, or until after the customer has been notified by the manufacturer. Another commentator recommended that the proposal be withdrawn and that there be closer liaison between the FAA and the manufacturers rather than regulations. The purpose of the proposal as expressed in Notice 69-12, is to provide the FAA with the earliest possible notification of failures, malfunctions, or defects in order that the FAA may take appropriate mandatory action, such as the issuance of an Airworthiness Directive. The FAA has no desire to alter existing manufacture-customer relationships and closer liaison with manufacturers has always been sought by the FAA. However, neither of these recommendations provide a substitute for the proposed regulation.

Several commentators pointed out that many persons holding operating certificates under Parts 121 and 127 also hold STC's and TSO authorizations. They point out that these persons would be required to report the same failure, malfunction, or defect under both the operating rules and the proposed regulation and that this dual reporting requirement is unnecessary. The FAA agrees with this comment. Moreover, the same would apply to persons holding operating certificates under Part 135 as a result of Amendment 135-12 (34 F.R. 19130). Therefore, the final rule provides that failures, malfunctions, or defects already reported under §§ 21.3 or 37.17 need not be reported under §§ 121.703, 127.313, or 135.57. A similar provision for manufacturers holding domestic repair station certificates was proposed in Notice 69-12 and the same relief has been provided in the final rule (by amendment to the foreign repair station regulations) to cover U.S. manufacturers holding foreign repair station certificates.

Finally, there was a comment from a foreign type certificate holder stating that the regulation is not clear as to the agency to whom foreign holders must report. The comment indicated that it would be contrary to accepted practice to report to the FAA directly and that reporting is usually accomplished through their national regulatory authorities. The FAA agrees. There are existing means by which the FAA obtains the necessary information regarding failures, malfunctions, or defects for foreign manufactured parts and products from the appropriate authorities in the country of manufacture. The FAA does not consider that it is necessary or appropriate to apply the proposed rule to foreign manufacturers at this time.

In consideration of the foregoing, Parts 21, 37, 121, 127, 135, and 145 of the Federal Aviation Regulations are amended, effective April 2, 1970.

These amendments are made under the authority of sections 313(a), 601, 603, 604, and 607 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, 1423, 1424, and 1427), and of section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

Amendment 127–16

Reporting Requirements for Manufacturers; Failures, Malfunctions, and Defects. Extension of Effective Date

Adopted: March 24, 1970 **Effective: March 24, 1970**

(Published in 35 F.R. 5319, March 31, 1970)

The purpose of this amendment is to extend to July 2, 1970, the effective date of the recently adopted regulation requiring manufacturers to report certain failures, malfunctions, or defects in the products or articles which they manufacture.

On February 11, 1970, the FAA adopted Amendments 21–29; 37–19; 121–58; 127–15; 135–15; and 145–9 and these amendments were published in the Federal Register on February 19, 1970, to become effective April 2, 1970. However, by letter dated March 4, 1970, the General Aviation Manufacturers Association, Inc., (GAMA) has requested a postponement of the effective date for at least 90 days. GAMA states that while the effect of the rule is still being studied and plans to meet the reporting requirements are being processed, such cannot be completed within the 28 working days allotted. The FAA agrees that some manufacturers may not be able to establish the necessary procedures and to assemble the necessary staff by April 2, 1970, and that justification exists for extending the effective date to July 2, 1970.

Since this amendment is an extension of the effective date of a new requirement and imposes no additional burden on any person, I find that notice and public procedure thereon are unnecessary and that good cause exists for making this amendment effective on less than 30 days notice.

In consideration of the foregoing, the effective date of Amendments 21–29; 37–19; 121–58; 127–15; 135–15; and 145–9 published in the Federal Register (35 F.R. 3154) on February 19, 1970, is extended to July 2, 1970.

This amendment is issued under the authority of sections 313(a), 603, 604, and 607 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, 1423, 1424, and 1425), and of section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

Amendment 127–17

Cockpit Voice Recorders in Helicopters

Adopted: May 4, 1970 **Effective: July 8, 1970**

(Published in 35 F.R. 7292, May 9, 1970)

The purpose of these amendments to Parts 29, 91, 121, and 127 of the Federal Aviation Regulations is to require the installation and use of approved cockpit voice recorders in large transport category helicopters that are operating under Part 121 or 127, and to prescribe in Part 29 standards governing cockpit voice recorder installations. These amendments were proposed in Notice 69–15 issued on March 29, 1969, and published in the Federal Register (34 F.R. 6196) on April 5, 1969.

Certain comments received questioned the value of cockpit voice recorders in helicopters. It should be pointed out that information provided by the recorders will be extremely useful in determining the probable cause of accidents involving helicopters and thereby assist the FAA in taking appropriate accident prevention measures in the interest of safety.

However, as some comments pointed out, if use of only a cockpit mounted area microphone is permitted by the regulations, the recording of voice communications may

be rendered unintelligible due to ambient noise levels on some helicopter flight decks and inherent helicopter vibration. In view of this comment, the rule has been changed to permit the installation of continually energized lip microphones or voice-actuated lip microphones at the first and second pilot stations as an alternative to installation of a cockpit-mounted area microphone.

Comments also suggested that voice recorders are not generally available which are constructed to meet the challenges of helicopter vibration and cockpit noise levels, and therefore the compliance date should be extended to allow development of appropriate recorder systems. The FAA has concluded that to ensure the availability of equipment and allow for realistic aircraft installation schedules, will require more time for compliance than proposed. Therefore, the compliance date is established as 1 year, rather than 6 months, after the effective date of this amendment.

The National Transportation Safety Board suggested that all turbine-powered aircraft with 10-passenger capacity operated on a scheduled basis be required to have a cockpit voice recorder, and another comment expressed the opinion that all aircraft in scheduled operations should be so equipped. Another comment stated that a flight recorder would provide more useful helicopter accident investigation information than a voice recorder, and if only one recorder is to be required, it should be the former. However, we have not been able to consider these comments in this rule-making action because they are outside the scope of the Notice.

The Air Line Pilots Association (ALPA) supported the requirement for the cockpit voice recorder, but opposed the use of any flight or voice recorder information for punitive action in any way whatsoever by a Government agency, air carrier, or other person. The agency is cognizant of the ALPA's interest and concern regarding the use of voice recorder tapes for purposes other than the investigation of aircraft accidents. Since this comment reiterates the basis for a petition filed by them with the agency, it will be considered in connection therewith.

Interested persons have been afforded an opportunity to participate in the making of this regulation and due consideration has been given to all relevant matter presented.

In consideration of the foregoing, Parts 29, 91, 121, and 127 of the Federal Aviation Regulations are amended, effective July 8, 1970.

These amendments are issued under the authority of sections 313(a), 601, 603, and 604 of the Federal Aviation Act of 1958 (49 U.S.C. 1354, 1421, 1423, and 1424), and of section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

Amendment 127–18

Reporting Requirements for Manufacturers; Failures, Malfunctions, and Defects. Extension of Effective Date

Adopted: June 26, 1970 **Effective: June 26, 1970**

(Published in 35 F.R. 10653, July 1, 1970)

The purpose of this amendment is to extend to October 2, 1970, the effective date of the recently adopted regulation requiring manufacturers to report certain failures, malfunctions, or defects in the products or articles which they manufacture.

On February 11, 1970, the FAA adopted Amendments 21–29; 37–19; 121–58; 127–15; 135–15; and 145–9 and these amendments were published in the Federal Register on February 19, 1970, to become effective April 2, 1970. The effective date was subsequently extended to July 2, 1970, at the request of the General Aviation Manufacturer's Association, Incorporated, to enable manufacturers to establish procedures and to assemble the staff needed to comply with the new regulations (Amendments 21–30; 37–20; 121–59; 127–16; 135–16; and 145–10, 35 F.R. 5319, March 31, 1970). I have determined that

there is a need for a further extension of the effective date of the new regulations for an additional 90 days.

Since this amendment is an extension of the effective date of a new requirement and imposes no additional burden on any person, I find that notice and public procedure thereon are unnecessary and that good cause exists for making this amendment effective on less than 30 days' notice.

In consideration of the foregoing, the effective date of Amendments 21–29; 37–19; 121–58; 127–15; 135–15; and 145–9 published in the Federal Register (35 F.R. 3154) on February 19, 1970, is extended to October 2, 1970.

This amendment is issued under the authority of sections 313(a), 603, 604, and 607 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, 1423, 1424, and 1425), and of section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

Amendment 127–19

Admission of Secret Service Agents to Flight Deck

Adopted: July 21, 1970 **Effective: July 31, 1970**

(Published in 35 F.R. 12061, July 28, 1970)

The purpose of these amendments to Parts 121 and 127 of the Federal Aviation Regulations is to authorize Secret Service Agents to be admitted to, and occupy a seat on, the flight deck of an aircraft carrying any person whose protection is a responsibility of the U.S. Secret Service under the laws of the United States.

The U.S. Secret Service is given protective responsibilities for the President of the United States, the Vice President, and other specified persons (18 U.S.C. section 3056). In addition, by a Joint Resolution of the Congress, the U.S. Secret Service has been given responsibility for furnishing protection to persons determined to be major presidential or vice presidential candidates (Public Law 90–331; 90th Cong., H. J. Res. 1292). The Joint Resolution directs Federal departments and agencies to assist the Secret Service, when requested by the Director thereof, in the performance of its protective duties under the Code and the Joint Resolution.

Current §§ 121.547(a)(3) and (b), and 127.211(a)(3) and (b) provide a basis for the action taken herein. Those sections state that admission to the flight deck is restricted, as relevant here, to employees of the United States who deal responsibly with matters relating to safety. Therefore, these amendments add new sections to Part 121 and Part 127 to require that admittance to the flight deck be granted Secret Service Agents upon presentation of their official credentials in the same manner in which §§ 121.548 and 127.212 require that admittance be granted to air carrier inspectors.

Inasmuch as the Secret Service has requested indefinite authorization, and the FAA is directed by the Congress to assist the Secret Service upon request and has found that no adverse effects have been indicated during the 2 years this authorization has been in force pursuant to Special Federal Aviation Regulations, and in view of the fact that the current authorization expires on July 31, 1970, I find that notice and public procedure hereon are impracticable and unnecessary, and that good cause exists for making these amendments effective in less than 30 days.

In consideration of the foregoing, Parts 121 and 127 of the Federal Aviation Regulations are amended, effective July 31, 1970.

These amendments are made under the authority of sections 313 and 601 of the Federal Aviation Act of 1958 (49 U.S.C. 1354 and 1421), section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)), and Public Law 90–331, 90th Cong., H. J. Res. 1292, June 6, 1968.

Amendment 127–20

Reporting Requirements for Manufacturers; Failures, Malfunctions, and Defects. Extension of Effective Date

Adopted: September 28, 1970 Effective: September 28, 1970

(Published in 35 F.R. 15288, October 1, 1970)

The purpose of these amendments is to further extend the effective date of Amendments 21–29, 37–19, 121–58, 127–15, 135–15, and 145–9 to the Federal Aviation Regulations which require manufacturers to notify the FAA of any failure, malfunction, or defect in any product, part, or article manufactured by them that could result in a hazard to flight.

Amendments 21–29, 37–19, 121–58, 127–15, 135–15 and 145–9 were published in the Federal Register on February 19, 1970 (35 F.R. 3154) to become effective April 2, 1970. The effective date was first extended to July 2, 1970, by Amendments 21–30, 37–20, 121–59, 127–16, 135–16, and 145–10 (35 F.R. 5319, March 31, 1970) and later extended to October 2, 1970 by Amendments 21–33, 37–22, 121–63, 127–18, 135–19, 145–11 (35 F.R. 10853, July 1, 1970).

Subsequently, however, it has come to the attention of the FAA that some of the reporting requirements set forth in Amendments 21–29, 37–19, 121–58, 127–15, 135–15 and 145–9, are ambiguous and may also require duplicate reporting of certain failures, malfunctions and defects. For these reasons, the FAA considers it necessary to clarify the reporting requirements and to remove any requirement that could result in duplicate reporting. It is contemplated that the amendments necessary to accomplish the foregoing will be issued in the very near future.

In view of the foregoing and the imminence of the October 2, 1970, effective date, the FAA has determined that there is a need for a further extension of the effective date of the new regulations.

Since this amendment is an extension of the effective date of a new requirement and imposes no additional burden on any person, I find that notice and public procedure thereon are unnecessary and that good cause exists for making this amendment effective on less than 30 days' notice.

In consideration of the foregoing, the effective date of Amendments 21–29, 37–19, 121–58, 127–15, 135–15, and 145–9 published in the Federal Register (35 F.R. 3154) on February 19, 1970, is extended to November 30, 1970.

These amendments are issued under the authority of sections 313(a), 603, 604, and 607 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, 1423, 1424, and 1425), and of section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

Amendment 127–21

Maintenance, Preventive Maintenance, and Alterations

Adopted: October 23, 1970 Effective: November 29, 1970

(Published in 35 F.R. 16793, October 30, 1970)

The purpose of these amendments to Parts 121 and 127 of the Federal Aviation Regulations is to authorize holders of certificates issued under those Parts to approve and return to service aircraft, airframes, aircraft engines, propellers, or appliances which have had maintenance performed by any person who does so in accordance with the certificate holder's airworthiness maintenance program and maintenance manual.

These amendments are based on a notice of proposed rule making (Notice 70–20), issued on April 29, 1970, and published in the Federal Register on May 5, 1970 (35 F.R. 7083).

The comments received in response to Notice 70–20 supported the proposal. The amendments authorize a certificate holder to approve for return to service aircraft, airframes, aircraft engines, propellers or appliances which have been maintained or altered by any person when that work is performed in accordance with the certificate holder's manual. Section 121.379(a) is amended so that the authorization of approval for return to service specified in § 121.379(b) includes work performed by others as well as work performed by the certificate holder. Paragraph 121.379(b) is also amended so that the reference to work performed for the certificate holder's approval includes that performed by other persons. Similar amendments are made to the provisions of FAR Part 127.

These amendments do not change the certificate holder's primary responsibility to maintain its aircraft in an airworthy condition, or to have it performed in accordance with its manual.

Interested persons have been afforded an opportunity to participate in the making of these amendments, and due consideration has been given to all matter presented.

In consideration of the foregoing, Parts 121 and 127 of the Federal Aviation Regulations are amended, effective November 29, 1970.

These amendments are issued under the authority of sections 313(a), 601, and 605 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, and 1425) and of section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

Amendment 127–22

Maintenance Manuals

Adopted: November 3, 1970 **Effective: December 7, 1970**

(Published in 35 F.R. 17176, November 7, 1970)

The purpose of these amendments to Parts 121 and 127 of the Federal Aviation Regulations is to permit certificate holders certificated thereunder to prepare, use, and distribute the maintenance part of their required manuals, in whole or in part, in microfilm, and to require those certificate holders electing to use the microfilm format to provide a suitable reading device for those persons to whom the certificate holder must distribute the manual.

These amendments are based on a notice of proposed rule making (Notice 70–4) issued on January 20, 1970, and published in the Federal Register on January 27, 1970 (35 F.R. 1054). Eight commentators responded to the Notice. Although all but one commentator favored the concept proposed, several suggestions were received and they are discussed below.

Parts 123 and 135 incorporate the manual requirements of Subpart G of Part 121 by references in §§ 123.27 and 135.2. Therefore, these amendments apply to Air Travel Clubs governed by Part 123 and also Air Taxi Operators governed by Part 135 who have authority to use large airplanes in the conduct of their operations.

Two commentators stated that the language as proposed indicated that certificate holders electing to use the microfilm maintenance manual would be required to supply the FAA (as one of the recipients of the maintenance manual) with a reading/printout device, and would thus be required to bear a significant economic burden. It was not the intent of the proposal to require the certificate holders electing to use the microfilm form to provide a device with both a readout and printout capability. The FAA believes that a readout device is sufficient to make the microfilm maintenance manual an acceptable form, if it provides an image which is of sufficient size and clarity to insure legibility. Accordingly, this amendment requires a reading device that provides a legible facsimile image of the microfilmed manual.

Comment was also received objecting to any requirement that certificate holders furnish the FAA with the necessary reading devices. The view was expressed that if all carriers supplied the various FAA offices with such devices the economic burden would be substantial and duplication would be unavoidable. Further, it was stated that the FAA should bear the expense of providing its personnel with the necessary equipment.

With regard to this objection, it should be pointed out that rather than supply various FAA offices with a reading device, the intent of the proposal, as expressed in the notice, was that each certificate holder would furnish but one reading device to the FAA, at the FAA District Office having jurisdiction over the particular certificate holder. In addition, the FAA does not agree that it should bear the expense of providing the necessary equipment inasmuch as the use of microfilm is permissive, and in light of the fact that a microfilm maintenance manual is not complete until it can be used and its use depends upon a suitable reading device. Because the certificate holder is required by the regulations to submit a maintenance manual, the FAA believes the certificate holder should be responsible for all steps necessary to make the manual complete.

It was suggested by one commentator that the term "microfilm", although technically the generic term for all microforms, be deleted and the term "microform" substituted therefor inasmuch as the former has a limited meaning to many people within and without the microfilm industry. While the FAA is aware of the distinction between the two terms, the term microfilm was chosen because it was broad enough to encompass several microforms. We believe the term will be readily understood among Part 121 certificate holders.

The one commentator opposed to the Notice stated that its experience with microfilm demonstrated that rather than solve the problems created by the conventional loose leaf maintenance manual, it merely continued these problems in a different form. Specifically, the commentator cited the frequent loss of temporary revisions, the failure of such revisions to be filed, the difficulty in using temporary revisions in conjunction with the cassette form, and the lack of readily available viewing devices. While the FAA is aware of the fact that in its initial stages the microfilm concept may cause minor problems in the physical handling of the manual, we believe, as stated in the Notice, that a microfilm manual, once it has been in use, will solve many more problems than it will create.

Another commentator questioned whether the requirement that the certificate holder furnish a reading device would be applicable in the case of supplemental air carriers or commercial operators who must carry their manuals aboard the aircraft pursuant to § 121.139(a). Inasmuch as the microfilmed manual is only complete when used in conjunction with a reader, it is the opinion of the FAA that a suitable reader should accompany the manual in the airplane in order to insure that the manual will be useable whenever a supplemental air carrier or commercial operator needs it. Therefore, § 121.139(a) has been amended accordingly.

Finally, it was recommended by several supporting commentators that the principle of the proposal be broadened to cover such items as operations manuals and operations specifications. The application of the microfilm concept to these other areas is outside the scope of the subject notice; however, the FAA will continue to study the feasibility and applicability of microfilm as suggested, and one source of information will be the experience gained in the use of the microfilmed maintenance manual. Furthermore, the FAA will consider the feasibility of using other technological advancements in related areas such as computer storage and transmission in an effort to provide the most effective system for the preparation, retention, and use of required information.

Interested persons have been given an opportunity to participate in the making of these amendments, and due consideration has been given to all relevant matter presented.

In consideration of the foregoing, Parts 121 and 127 of the Federal Aviation Regulations are amended, effective December 7, 1970.

These amendments are made under the authority of sections 313(a) and 601(a) of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a) and 1421), and of section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

Amendment 127–23

Reporting Requirements for Manufacturers; Failures, Malfunctions, and Defects

Adopted: November 24, 1970 **Effective: November 30, 1970**

(Published in 35 F.R. 18187, November 28, 1970)

The purpose of these amendments to the Federal Aviation Regulations is to clarify and relax the reporting requirements for manufacturers and to revoke the amendments to Parts 21, 37, 121, 127, 135, and 145 of the Federal Aviation Regulations contained in Amendments 21–29, 37–19, 121–58, 127–15, 135–15, and 145–9, published in the Federal Register on February 19, 1970 (35 F.R. 3154).

Amendments 21–29, 37–19, 121–58, 127–15, 135–15, and 145–9, effective April 2, 1970, require certain manufacturers to notify the FAA of any failure, malfunction, or defect in any product or part manufactured by them that could result in a hazard to flight. The effective date of those amendments was later extended to November 30, 1970, by Amendments 21–35, 37–25, 121–68, 127–20, 135–21, and 145–12, (35 F.R. 15288). Subsequently, however, it has come to the attention of the FAA that the reporting requirements are, in some instances, ambiguous and in certain areas may require duplicate reporting. Since Amendments 21–29, 37–19, 121–58, 127–15, 135–15, and 145–9 do not become effective until November 30, 1970, the FAA considers it appropriate to clarify the regulations containing the reporting requirements for manufacturers and to remove any requirement that could result in duplicate reporting before those regulations become effective. These changes are discussed hereinafter.

The requirements of §§ 21.3 and 37.17 require a holder of a type certificate (including a supplemental type certificate), or a Parts Manufacturer Approval (PMA), or a TSO authorization, or the licensee of a type certificate, to notify the FAA within 24 hours after it discovers or is informed of a failure, malfunction, or defect in any product or part manufactured by it, of any such failure, malfunction, or defect that could result in a hazard to flight. Several interested persons have recently advised the FAA that this requirement is ambiguous, since any failure, malfunction, or defect, including the failure of a single rivet, could result in a hazard to flight. Thus, they contend, the manufacturers would have to report all failures, malfunctions, and defects. The FAA is aware that this would defeat the purpose of the regulation. Therefore, it is considered appropriate to clarify the regulation by listing the particular occurrences which constitute a hazard to flight for the purpose of reporting requirements and by requiring the reporting of a failure, malfunction, or defect only after it has been determined that such failure, malfunction, or defect has resulted in any of the listed hazards to flight. The requirements of §§ 21.3 and 37.17 have also been revised to make it clear that where a manufacturer determines that there is a defect in any product, part or article that it manufactures that would result in any of the listed hazards to flight, the manufacturer need only report the defect if any of the defective products, parts or articles have left its quality control system.

The FAA is also aware that requiring a manufacturer to report failures, malfunctions and defects which it "discovers or is informed of" could result in the reporting of unconfirmed occurrences. Such reports would be of no value to the FAA. Therefore, the provisions of §§ 21.3 and 37.17 have been revised so that manufacturers need report only failures, malfunctions, and defects which they have determined have resulted or would result in any of the listed hazards.

In addition to the foregoing, the requirements of §§ 21.3 and 37.17 have been relaxed to make them consistent with similar reporting requirements in the operating rules. In this connection, special late reporting provisions have been added covering reports that would be due on Saturday, Sunday, or a holiday.

Finally, the regulation has been revised to eliminate additional areas where duplicate reporting could occur. Thus, reports need not be made of any failure, malfunction, or defect that the manufacturer knows has already been reported by another person under the Federal Aviation Regulations or that the manufacturer has already reported to the

National Transportation Safety Board. Moreover, the FAA is not interested in a manufacturer's report on any failure, malfunction, or defect that is caused by improper maintenance or improper usage.

These amendments contain clarifications and relaxations of the rules that were adopted to become effective on November 30, 1970. They have been coordinated with representatives of the industry to the extent possible. However, in view of the imminent effective date of Amendments 21–29, 37–19, 121–58, 127–15, 135–15, and 145–9, further notice and public procedure hereon is impracticable and good cause exists for making them effective on less than 30 days' notice.

In consideration of the foregoing:

1. The amendments to Parts 21, 37, 121, 127, 135, and 145 of the Federal Aviation Regulations contained in Amendments 21–29, 37–19, 121–58, 127–15, 135–15, and 145–9, and published in the Federal Register on February 19, 1970 (35 F.R. 3154) and Amendments 21–30, 37–20, 121–59, 127–16, 135–16, and 145–10, published in the Federal Register on March 31, 1970 (35 F.R. 5319) and Amendments 21–33, 37–22, 121–63, 127–18, 135–19, and 145–11, published in the Federal Register on July 1, 1970 (35 F.R. 10653) and Amendments 21–35, 37–25, 121–68, 127–20, 135–21, and 145–12, published in the Federal Register on October 1, 1970 (35 F.R. 15288) are hereby revoked effective November 30, 1970; and

2. Parts 21, 37, 121, 127, 135, and 145 of the Federal Aviation Regulations are amended, effective November 30, 1970.

These amendments are made under the authority of sections 313(a), 601, 603, 604, and 607 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, 1423, 1424, and 1427), and of section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

NOTE: The reporting and/or recordkeeping requirements contained herein have been approved by the Bureau of the Budget in accordance with the Federal Reports Act of 1942.

Amendment 127–24

Clarification of Proving Test Requirements

Adopted: March 5, 1971 **Effective: March 13, 1971**

(Published in 36 F.R. 4863, March 13, 1971)

The purpose of this amendment of § 127.73 of the Federal Aviation Regulations is to clarify the requirement that proving tests be performed under the observation of the Administrator.

Section 127.73 now states that in addition to aircraft certification tests, an aircraft must have a set minimum number of proving test hours under the observation of the Administrator before an air carrier may operate the aircraft. The present wording of this section, read in light of the preamble to Amendment 127–8 (issued on July 12, 1968, and published in the Federal Register on July 19, 1968 (33 F.R. 10329)), indicates that an FAA inspector must be on board the aircraft before the flight hours can be credited toward the proving test requirement.

However, prior to Amendment 127–8, the FAA did not actually observe every flight. In the usual proving test procedure, an operator proposing to conduct a proving test submits a program detailing the tests and procedures to be demonstrated. The inspector then reviews the program for compliance with appropriate requirements and meets with the operator's personnel to discuss establishment of a proving test program.

The nature of the factors to be evaluated govern the demonstrations comprising each program. In the case of a helicopter not before proven, the tests are primarily required to demonstrate helicopter reliability, while in the case of a helicopter having substantial air carrier service, but new to the operator concerned, the proving tests are essentially a demonstration of the operator's competence to handle the helicopter. In either event, the tests are conducted in accordance with a program submitted by the

air carrier and acceptable to the Administrator. Under this procedure an FAA inspector determines which tests require his presence on board the helicopter as an observer in order for them to be acceptable to the Administrator, as well as those tests which are acceptable without being observed by the FAA.

Therefore, § 127.73 is being amended to delete the requirement that all proving flights must be observed by the Administrator, thereby making it possible for the FAA to administer the rule in a manner consistent with established procedures. To accomplish this, the words "acceptable to the Administrator" have been substituted for the words "under the Administrator's observation" in all places where they appear in the rule.

Amendment 127–8 inadvertently omitted the word "unnecessary" after the word "compliance" in subparagraph 127.73(b)(2). This amendment corrects that omission.

Since this amendment is clarifying in nature and does not impose a burden on the public, I find that notice and public procedure thereon are unnecessary and that the amendment may become effective on less than 30 days' notice.

In consideration of the foregoing, § 127.73 of the Federal Aviation Regulations is amended, effective March 13, 1971.

This amendment is made under the authority of sections 313(a), 601, and 604 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, and 1424), and section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

Amendment 127–25

Fastening of Safety Belts

Adopted: June 21, 1971 **Effective: August 30, 1971**

(Published in 36 F.R. 12511, July 1, 1971)

The purpose of these amendments to Parts 91, 121, and 127 of the Federal Aviation Regulations is to require that each occupant of an aircraft fasten his safety belt during the takeoff and landing of that aircraft, and to exempt airships from the requirement to have safety belts.

These amendments are based on two notices of proposed rule making: Notice 69–55, issued on December 18, 1969, and published in the Federal Register on January 8, 1970 (35 F.R. 324), and Notice 70–23, issued on June 24, 1970, and published in the Federal Register on June 30, 1970 (35 F.R. 10596).

Part 123 certificate holders (Air Travel Clubs) and Part 135 certificate holders (Air Taxi Operators) are subject to the requirements of this amendment, since § 123.27 requires compliance with § 121.311 and operations conducted under Part 135 with small aircraft are subject to the requirements of § 91.14 prescribed herein. However, operations conducted under Parts 121, 123, and 127 are expressly excluded from the seat and safety belt requirements of § 91.14, since those operations are subject to the requirements prescribed for them in Parts 121 and 127.

Many of the comments objecting to the proposed safety belt requirement erroneously supposed that the "separate use" provisions for Parts 121 and 127 operations applied to Part 91 operations. It is not intended that separate seats nor separate safety belts be required for operations conducted under Part 91. The amendment requires separate seats and safety belts only for those operations that must comply with either Part 121 or 127. Part 91 requires only that each person on board occupy a seat or berth with a safety belt properly secured about him.

Other comments stated that the proposed amendments are not justified, or are trivial, or are not enforceable. In spite of these objections, we believe adoption of the proposal will serve a useful purpose, and will contribute to safety in air commerce. The fact that each person on board an aircraft engaged in Part 91 operations must be notified to fasten his safety belt provides a level of safety not now provided. The

wording of § 91.14 has been changed from the Notice to make it clear that it is the responsibility of the pilot in command to ensure that all persons on board the aircraft have been notified to fasten their safety belt. In the exercise of this responsibility, the pilot in command may assign to other crewmembers the function of notifying the passenger. This responsibility should rest with the pilot in command, since he is in the best position to know when the takeoff or landing is imminent.

Other comments objected to the requirement for seats and safety belts because it would conflict with the conventional practices of sports parachute jumpers. In recognition of the fact that jumpers usually sit on the floor of the aircraft where the seats have been removed, this amendment adds a provision which permits jumpers engaged in sports parachuting to use the floor of the aircraft as a seat. However, in the interest of safety, we consider it necessary that sports parachute jumpers use safety belts, particularly since it is not uncommon for the door of the aircraft to be removed during such activities.

Upon consideration of comments received, this amendment excludes airships from the safety belt requirement in § 91.33 and makes the requirement in § 91.14 for the use of safety belts applicable to all aircraft except airships, including experimental aircraft, gliders, and aircraft being operated under special flight authorizations.

Although several persons stated that weight rather age should be used to determine who should be required to use safety belts, the weight criteria would be more difficult to implement; therefore, the age criteria is retained.

Comments received from Part 127 operators and the Aerospace Industries Association of America, Inc., have convinced us that scheduled air carriers using large helicopters should continue to be authorized to permit two children who have not reached their twelfth birthday to use one safety belt in a single seat if the strength requirements of the seat and the safety belt are not exceeded. Accordingly, the amendment retains this authority, with language to make the safety belt fastening requirement consistent with the provisions of other paragraphs in the amendment.

Interested persons have been afforded an opportunity to participate in the making of these amendments, and due consideration has been given to all matter presented.

In consideration of the foregoing, Parts 91, 121, and 127 of the Federal Aviation Regulations are amended, effective August 30, 1971.

These amendments are proposed under the authority of sections 313(a), 601, and 604 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, and 1424), and section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

Amendment 127–26

National Weather Service

Adopted: July 20, 1971 **Effective: July 20, 1971**

(Published in 36 F.R. 13911, July 28, 1971)

The purpose of these amendments is to change the name Weather Bureau to read National Weather Service in the Federal Aviation Regulations. This change will affect §§ 1.1, 61.113, 61.143, 65.55, 121.101, 121.119, 121.651, 127.49, 135.65, and 141.47.

By virtue of Department of Commerce Organization Order 25–5B the name "Weather Bureau" has been changed to "National Weather Service," effective October 9, 1970. These amendments are necessary to make the Federal Aviation Regulations consistent with the name established by Order 25–5B.

Since the amendments to Parts 1, 61, 65, 121, 127, 135, and 141 are editorial in nature, I find that notice and public procedure thereon are unnecessary and that good cause exists for making them effective in less than 30 days.

In consideration of the foregoing, Parts 1, 61, 65, 121, 127*, 135, and 141 of the Federal Aviation Regulations are hereby amended, effective July 20, 1971.

These amendments are issued under the authority of sections 313(a) and 601 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a) and 1421), and section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

* Amended § 127.49(a).

Amendment 127–27

Carriage of Narcotic Drugs, Marihuana, and Depressant and Stimulant Drugs or Substances by Aircraft

Adopted: August 25, 1971 **Effective: August 31, 1971**

((Published in 36 F.R. 17495, September 1, 1971))

The purpose of these amendments to the Federal Aviation Regulations is to identify substantively the violations of Federal narcotics laws now listed in the pertinent regulations by U.S. Code citations, and to make other editorial changes brought about as a result of the new Comprehensive Drug Abuse Prevention and Control Act of 1970 (P.L. 91–513).

Since these amendments are editorial in nature, and no substantive change in the regulations is effected, I find that notice and public procedure thereon are unnecessary and that they may become effective in less than 30 days.

In consideration of the foregoing Parts 61, 63, 91, 121, 123, 127, and 135 of the Federal Aviation Regulations are amended as follows effective August 31, 1971.

Sections 307(c), 313(a), 601, 602, and 604 of the Federal Aviation Act of 1958 (49 U.S.C. 1348(c), 1354(a), 1421, 1422, and 1424) and section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

Amendment 127–28

Aircraft Maintenance and Related Records

Adopted: August 1, 1972 **Effective: September 8, 1972**

(Published in 37 F.R. 15981, August 9, 1972)

The purpose of these amendments to Parts 43, 91, 121, and 127 of the Federal Aviation Regulations is to revise the maintenance and related recordkeeping requirements for aircraft and aircraft components.

These amendments are based on a Notice of Proposed Rule Making (Notice 70–43) published in the Federal Register on October 29, 1970 (35 F.R 16740). A number of comments were received in response to the Notice and, except for those indicating agreement with the proposal or merely repeating issues discussed and disposed of in the Notice, the FAA's disposition of the comments is set forth hereinafter.

Several commentators were concerned that proposed § 91.173 would require more recordkeeping than is now required by the present rule thereby increasing the burden on owners and operators. However, the comments did not cite specific examples to support their concern in this respect. In this connection, both the present and the proposed rules require a complete record of maintenance and alteration of each aircraft and engine. The proposal is clarifying, however, in specifically requiring that records of maintenance and alteration be kept also for propellers, rotors, and appliances. Moreover, whereas the present rule requires total time in service records for aircraft and certain engines, the proposal requires such records only for the airframe and as necessary for showing the current status of life-limited parts, applicable airworthiness directives, and aircraft inspections. A primary objective of the amendments is to produce more useful records and while it is not possible to say in any given case that recordkeeping will not be increased, it is possible that in some instances, there may be a reduction.

In further connection with the recordkeeping under proposed § 91.173, one commentator was concerned that the proposal did not give assurance that work already performed would not be subject to record verification back to the time of construction of the basic airplane or component. However, the commentator's suggestion, that a date be established after which the data specified in the proposal would be required, would permit all records of work performed prior to that date to be destroyed. The purpose of the proposal was to ease the record retention requirement of the present regulations which make no provision for the disposal of superseded or obsolete records that are now part of the "permanent" records and accordingly required to be retained for the life of the article. Proposed § 91.173 effectively makes provision for retaining specific records only for the period of time they are useful, after which they may be discarded. This applies to existing as well as future records. To the extent that the commentator is concerned that the data required to be retained under the present regulations may be set forth in a number of documents and that those documents may also contain data that can be disposed of under the proposal, it should be noted that the owner or operator has the option of retaining those documents or establishing a new record containing only the required data.

Pointing out that proposed § 91.173 does not make specific provision for logging repairs or alterations by reference to FAA Form ACA–337, one commentator asked if that procedure were being deleted. The proposal makes the language of § 91.173(a)(1)(i) consistent with that of § 43.9(a)(1). Accordingly, where maintenance or alteration is recorded by reference to Form ACA–337 in compliance with § 43.9(a)(1), the owner or operator receives from the person who maintains or alters the aircraft an entry to that effect in the aircraft maintenance record. That entry meets the requirement of § 91.173(a)(1)(i) since it references data acceptable to the Administrator and any further description of the work would be superfluous. For this reason, it is unnecessary to include a provision that repairs or alterations may be logged by making

specific reference to Form ACA–337 even though, as indicated above, such a recording procedure may continue to be utilized in an appropriate situation.

Three commentators requested clarification of the intent or meaning of the phrase "current status of life-limited parts" used in proposed §§ 91.173(a)(2)(ii) and 91.174(b)(4). Two other commentators questioned whether "life-limited" referred to manufacturers' recommendations or to limitations included in the aircraft type certificates issued by the FAA. The intent of the proposal is to assure that records are kept from which the "current status" of life-limited parts can be determined. The term "life-limited parts" refers to parts or components for which retirement times, service life limitations, parts retirement limitations, retirement life limitations, or life limitations exist. By whatever term they are called, such limitations on life-limited parts are those that are "required" by the Administrator under the provisions of the Federal Aviation Regulations. "Required" life-limits may be established during the type certification of a product and set forth in the type certificate data sheet (or product specification that is a part of the type certificate). They may also be established in an airworthiness directive, in an operator's operations specifications, in an FAA-approved maintenance program, including an inspection program, or in the limitations section of an Airplane Flight Manual or other manual required by an operating rule. Similarly, the phrase "required to be overhauled on a specified time basis", as used in proposed §§ 91.173(a)(2)(iii) and 91.174(b)(5), means "required" by the Administrator under the provisions of the Federal Aviation Regulations and refers to those items which must be overhauled on a specified or "hard" time inservice basis established by one of the same procedures mentioned above in connection with life-limited parts.

Indicating its belief that proposed § 91.173 does not go far enough in setting forth recording requirements, one commentator suggested that the amendment should also require a record of maintenance that had been scheduled but not performed as, for example, work written up by technicians and inspectors or included in a service bulletin but not accomplished prior to return to service because it had been deferred or deemed to be a "noncompliance" item. The situation presented by this commentator relates to air carrier operations and is, therefore, not properly cognizable under § 91.173. However, to the extent that it applies to maintenance in general, the FAA does not agree with this concept of recordkeeping. The FAA believes that a proper maintenance record is a record of the work actually done and of the identification of the persons approving the work. Moreover, contrary to a further recommendation, the FAA does not believe there is any necessity that work performed be recorded both by description and by reference to data acceptable to the Administrator since a proper description of the work may be given without reference to bulletins, manuals, or engineering data.

With reference to the disposition of records, one commentator suggested that at the time of the annual inspection, the required data on time-in-service alterations, and airworthiness directives be submitted to the FAA for retention. Another commentator in a similar vein wanted records of all work, including nondestructive test records, kept for one year, whether or not the work was repeated or superseded, and then microfilmed and submitted to the FAA. The FAA disagrees with these comments. Obsolete and redundant records do not aid in determining the current condition of an aircraft, and the FAA does not have facilities to be the repository of such records. Current records, as provided in the amendment to § 91.173, are to be retained by the owner or operator.

One commentator recommended that maintenance records should be required for any time period that an aircraft may have been a public aircraft. However, under the Federal Aviation Act of 1958 public aircraft are not subject to the certification and maintenance requirements of the Federal Aviation Regulations. Therefore, a prospective purchaser of a public aircraft must assess the records of such an aircraft against the recordkeeping requirements of § 91.173 to assure their adequacy for civil aircraft purposes. Finally, it should be noted in connection with proposed § 91.173, that clarification of the term "approved", as requested by another commentator, is unnecessary in view of the definition of that term in Part 1 of the Federal Aviation Regulations. However, § 91.173(a)(1) has been revised to make it clear that it includes records of other required inspections as well as of other approved inspections. In addition, for further clarification and consistency, § 91.173(a)(2) has been revised to list, as records required to be kept, all the information listed for transfer in § 91.174(b) of the proposal.

With regard to proposed § 91.174(b)(1), one commentator reported seeing logbook entries that recorded compliance with airworthiness directives without including a description of compliance, and recommended that a "grandfather" provision be provided or the regulation be made more specific as to recording the method of compliance. Contrary to the commentator's understanding, proposed § 91.174(b)(1) merely continues the present requirement that the method of compliance must be recorded. It should be noted that airworthiness directives generally refer to a manufacturer's service bulletin for one acceptable method of compliance, and if the service bulletin is followed, the record of the method of compliance may be made by referencing the service bulletin.

The present regulations require that the entire maintenance record be given to the transferee upon disposition of an aircraft. Notice 70–43, on the other hand, proposed that the mandatory transfer of maintenance records include only summary information in the form of various status and time lists. One commentator requested clarification of the proposed record transfer requirement since it appeared that the transfer of the other maintenance records should be the subject of agreement between seller and purchaser. In this connection, the proposal continued the requirement that all maintenance records required to be kept be made available for inspection by the FAA and the National Transportation Safety Board (NTSB). Therefore, to insure the availability of necessary records, notwithstanding an intervening sale, the transfer requirements of new §§ 91.174, 121.380a and 127.142, make provision for all maintenance records required to be kept. Following the suggestion of the commentator, maintenance records, other than the status and time summaries, may either be transferred to the purchaser or, upon agreement of seller and purchaser, remain in the physical custody of the seller. In the latter event, however, the purchaser as the new owner, or operator, is not relieved of his responsibility to make the records available for inspection by the FAA and the NTSB.

One commentator objected to continuation of the requirement stated in proposed § 121.380(b) for retention of the record of the last complete overhaul of certain items. The commentator contends that for many such items used by air carriers, complete overhaul has been effectively superseded by the application of various maintenance control programs such as condition-monitoring and fault-isolation techniques. The FAA does not agree, however, that all provisions for overhaul record retention should be deleted. The proposal takes into account the realistic needs of the air carriers and investigative agencies in relation to the present state-of-the-art of data collection, recording, and storage. Notwithstanding the availability of various maintenance control program techniques, overhaul remains a part of maintenance even though the number of items overhauled may vary from operator to operator. Where a maintenance program for an item of aircraft equipment does not require overhaul, of course, there will be no overhaul records requiring retention under this provision. The FAA does agree that there should be a provision for the disposal of overhaul records when the work is superseded by other work. The intent of the Notice was that overhaul records not be subject to the one year rule but that they be retained until the work is superseded by work of equivalent scope and detail, and the proposal has been changed accordingly.

With reference to a query regarding the airworthiness release form, it should be noted that the form itself is not a maintenance record covered by the retention requirements of § 121.380, notwithstanding certain requirements for records relative to it as stated in that section. Retention of the airworthiness release form continues to be governed by § 121.709.

Another comment questioned the different retention times for certain records by air carriers and by repair stations and manufacturers doing work for the carriers and further alleged that the proposal requires a duplication of certain records. However, the FAA does not believe there is any inconsistency. The recording and retention requirements for the carriers on the one hand and repair stations and manufacturers on the other are necessarily governed by the needs of each and are not duplicative. A person performing maintenance for an air carrier must perform and record that work in accordance with the carrier's manual but the manual need not be identical with recording requirements for repair stations or manufacturers.

Anticipating a situation in which records required to be transferred with an aircraft might not be available, one commentator recommended the retention of the provisions of present § 121.699(c) under which an aircraft component, aircraft engine, propelier, or appliance could be placed in service without complete records if certain conditions are met. However, since the comment was specifically directed at the airframe, the provisions of the section that is being deleted would be inapplicable in any event under the conditions stated in present § 121.699(c). Moreover, as the commentator recognized, it would be rare not to have the aircraft history and total time records available, and such cases should be dealt with on an individual basis.

Proposed § 91.173 deletes the present reference to "permanent" maintenance records. Similarly, proposed §§ 121.380 and 127.141 delete the provisions contained in the present sections which, in part, require a record of "all" maintenance. For internal consistency, the related provisions of Part 43—Maintenance, Preventive Maintenance, Rebuilding, and Alteration, should also be changed. Accordingly, this amendment includes editorial changes to §§ 43.9 and 43.11 which delete the word "permanent" in connection with maintenance record entries, and the word "all" with reference to the recording of air carrier or commercial operator maintenance, rebuilding, and alteration.

Finally, the proposal has been editorially revised and minor clarifying changes have been made in the wording of the regulations proposed in Notice 70–43. However, these changes are nonsubstantive in nature. In this connection, § 91.161(b) is being amended to exempt aircraft maintained in accordance with a continuous airworthiness maintenance program as provided in Part 121, or 127, or 135 from the requirements of § 91.174 and the same requirements are being made applicable to those certificate holders in new §§ 121.380a and 127.142. This revision is consistent with the current exemption for these aircraft from the requirements of § 91.173.

Interested persons have been afforded an opportunity to participate in the making of these amendments, and due consideration has been given to all matter presented.

In consideration of the foregoing, Parts 43, 91, 121, and 127 of the Federal Aviation Regulations are amended as follows, effective September 8, 1972.

These amendments are made under the authority of sections 313(a), 601, and 605 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, and 1425), and of section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

Amendment 127–29

Airplane and Rotorcraft Manuals, Markings, and Placards

Adopted: September 19, 1972 Effective: October 23, 1972

(Published in 37 F.R. 20022, September 23, 1972)

The purpose of these amendments to Parts 23, 27, 91, 121, and 127 of the Federal Aviation Regulations is to revise and clarify the requirements for airplane and rotorcraft manuals, markings, and placards.

These amendments are based on a Notice of Proposed Rule Making (Notice 70–47) issued on November 18, 1970, and published in the Federal Register on November 25, 1970 (35 F.R. 18054). Three comments were received in response to Notice 70–47, one of which favored the proposed amendments. The two comments recommending changes to the proposed amendments are discussed below. Based upon these comments and upon further consideration by the FAA, a number of substantive and editorial changes have been made to the proposed rule. Interested persons have been afforded an opportunity to participate in the making of these amendments, and due consideration has been given to all relevant matter presented. Except as modified by the following discussion, the reasons for these amendments are those in the Notice.

One comment suggested that all aircraft, including those weighing less than 6,000 pounds, should have approved Airplane Flight Manuals containing all of the required information and that placards should be kept on the aircraft for emergency reference only. Commentator stated that a flight manual can be temporarily removed from the aircraft for comfortable reference in a ramp office when outside temperatures are extremely high or low, and that fewer C.G. out of limit or overweight temperature accidents will occur with small aircraft if the total information is available for reference in a comfortable environment. The airworthiness requirements were changed in 1953 to eliminate the requirement for Airplane Flight Manuals for airplanes under 6,000 pounds, and the FAA agrees that this exception should be reconsidered in view of the complexity of small airplanes being type certificated today and the resulting increase in information that must be made available to the pilot. However, that consideration is beyond the scope of Notice 70–47. The Notice proposed amendments to the present regulations which are primarily clarifying in nature and intended to make the present airworthiness standards and operating rules internally consistent. Nevertheless, the comment is appreciated and will be considered for future rule making action. However, in response to the comment and to insure that the information is readily available to the pilot, proposed § 23.1559 has been revised to require the form and location of the "approved manual material" to be specified in the operating limitations placard.

Another comment, while agreeing with the proposed changes to §§ 23.31 and 23.1541, noted that the proposed change to § 23.1559 would eliminate the "operating limitations placard" for airplanes certificated in a single category. This was not the intent of the proposal and proposed § 23.1559(a) has been changed to include airplanes type certificated in only one category. In addition, proposed § 23.1559(a) has been editorially revised to indicate the mandatory status of the operating limitations contained in the Airplane Flight Manual, approved manual material, markings, and placards.

With respect to the proposed amendment to § 23.1581, a commentator opposed the insertion of the word "approved" before the word manual and the requirement that "all approved manual material must be approved, clearly identified and not easily erased, disfigured, or misplaced." The commentator stated that to require FAA approval for material which previously did not require approval would materially complicate a system that has been successfully used by manufacturers for 15 years and that there is no safety justification or administrative need for the requirement. The FAA does not agree. The applicable information in §§ 23.1583 through 23.1589 that proposed § 23.1581 would require to be furnished in an Airplane Flight Manual or in any combination of approved manual material, markings, and placards is necessary for the safe operation of an airplane and the form and manner in which that information is presented to the pilot as well as the information itself should be approved by the FAA. However, proposed

§§ 23.1581(b) and 27.1581(b) have been revised to further specify the form and content of the "approved manual material."

Based on further consideration of the requirement in proposed § 27.1581(a)(2) that the information contained in §§ 27.1583 through 27.1589 be furnished not only in a Rotorcraft Flight Manual or approved manual material but also in markings and placards, the proposal has been revised to permit the information to be furnished either in a Rotorcraft Flight Manual or in any combination of approved manual material, markings, and placards. The FAA has determined that it is not necessary for the information contained in §§ 27.1583 through 27.1589 to be furnished in one form and then repeated in the form of markings and placards. As revised the requirement is consistent with the amendment to § 23.1581 and is the same as present § 27.1581(a)(2) except that the option of furnishing the information in approved manual material is provided for in the event that the operating rules of Chapter I do not require a Rotorcraft Flight Manual.

Finally, consistent with the amendments to §§ 23.1559 and 27.1501, § 27.1559 is amended to reflect the option for a helicopter, of using a Rotorcraft Flight Manual or approved manual material to furnish the required operating limitations and to require that the form and location of approved manual material be set forth in the operating limitations placard.

In consideration of the foregoing, Parts 23, 27, 91, 121, and 127 of the Federal Aviation Regulations are amended, effective October 23, 1972.

These amendments are adopted under the authority of sections 313(a), 601, and 603 of the Federal Aviation Act of 1958 (49 U.S.C. 1354, 1421, and 1423), and section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

Amendment 127–30

Miscellaneous Amendments

Adopted: December 13, 1972 Effective: December 20, 1972

(Published in 37 F.R. 28053, December 20, 1972)

The purpose of these amendments to Parts 121 and 127 of the Federal Aviation Regulations is to make certain clarifying changes to the provisions of § 121.367(c) and § 127.133(c) which pertain to programs required to ensure that aircraft released to service are airworthy and properly maintained.

Section 121.367 prescribes program requirements for aircraft inspections, maintenance, preventive maintenance, and alterations that apply to all Part 121 certificate holders. The purpose of paragraph (c) of that section is to ensure the airworthiness and proper maintenance of each aircraft released to service by a Part 121 certificate holder for operations governed by that Part. Therefore, the wording of paragraph (c) should be such as to clearly reflect its applicability not only to aircraft released by air carriers for service in air transportation, but also to those released by commercial operators for operation in air commerce under Part 121. Accordingly, for purposes of clarification this amendment replaces the words "operation in air transportation" currently in paragraph (c) with the more appropriate words "operation under this Part."

In order to maintain uniformity in the wording of similar regulatory provisions in different parts of the Federal Aviation Regulations, the same clarifying changes are made by this amendment to § 127.133(c) of Part 127 of the Federal Aviation Regulations.

Since these amendments are merely clarifying in nature, I find that notice and public procedure thereon are unnecessary and that good cause exists for making them effective on less than 30 days' notice.

In consideration of the foregoing, Parts 121 and 127 of the Federal Aviation Regulations are amended, effective December 20, 1972.

These amendments are issued under the authority of sections 313(a), 601, 604, and 605 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, 1424, and 1425), and section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

Amendment 127-31

Airborne ATC Transponder Equipment

Adopted: December 18, 1972 **Effective: January 26,1973**

(Published in 37 F.R. 28495, December 27, 1972)

The purpose of these amendments to Parts 37, 43, 91, 121, 127, and 135 of the Federal Aviation Regulations is to provide new standards for Airborne ATC Transponder Equipment and to require that transponders in aircraft meet TSO standards.

These amendments are based on a Notice of Proposed Rule Making (Notice 71-10) issued on March 22, 1971, and published in the Federal Register on March 30, 1971 (36 F.R. 5853). Numerous comments were received in response to Notice 71-10 and the relevant comments are discussed below. Based upon these comments and upon further consideration by the FAA, a number of changes have been made to the proposed rule.

Interested persons have been afforded an opportunity to participate in the making of these amendments, and due consideration has been given to all relevant matter presented. Except as modified by the following discussion, the reasons for these amendments are those set forth in the Notice.

A number of comments objected to the use of the TSO system for the approval of Class 2A and 2B ATC transponders. The commentators assert that the TSO system is primarily intended to provide approvals for equipment for air carrier operations, that it is too time-consuming and costly for equipment intended to be used on general aviation aircraft, and that alternative approval methods should be allowed. It should be noted that under § 21.305 of the Federal Aviation Regulations an appliance may be approved under the TSO system, or as part of the aircraft design under the aircraft type certification procedures, or in any other manner approved by the Administrator. The same methods of approval are permitted under the proposal and this amendment. The FAA does not believe that the methods suggested by the commentators would provide the production quality control and FAA surveillance that is necessary to assure that the transponders meet the proposed standards which are required for FAA approval.

In response to a number of comments that the proposed TSO data requirements in subparagraph (d)(1)(iv) of § 37.180 can be interpreted as requiring a full compliance test program on each production unit, the subparagraph has been revised to make it clear that the equipment data sheet must specify the actual performance of equipment of a type rather than of each individual unit. In addition, subparagraph (d)(2) has been revised to include, by reference, the manufacturer's operating instructions and equipment limitations in the information that must be furnished with each article.

A number of comments objected to the implementation dates specified in the notice. All but one of those commentators maintained that the proposed effective dates would not provide a reasonable service life for the equipment already in service or in production, and they recommended a postponement in the implementation dates for periods varying from a few years to an indefinite period of time. The other commentator recommended that the implementation date for newly installed equipment in air carrier aircraft be the same as the implementation date for the rules that will result from Notice of Proposed Rule Making No. 69-9. Based on this comment and upon further consideration the implementation dates have been changed to January 1, 1974, for new equipment installations and July 1, 1975, for all equipment installations in order to make them consistent with the dates proposed in Notice 69-9, as supplemented by Notice 72-12.

In response to the request in Notice 71-10 for comments as to the need for the proposed low altitude transponder category, numerous comments were received recommending its retention. Several of the commentators also suggested that the utilization altitude be tied to an operational air traffic control altitude presently in use, such as the 18,000 foot altitude used to define positive control areas. In support of the retention of a low altitude transponder category, the commentators estimated variously that high altitude transponders are from 5% to 82% more costly than low altitude transponders, and that it would be unreasonable to require a high altitude transponder on aircraft which would

only operate above the altitude under extreme weather or emergency conditions. Based on these comments, the amendment retains the provisions for a low altitude transponder category. The FAA does not agree with the suggestion that the altitude limit for use of low altitude transponders be tied to defined positive control areas because of equipment considerations.

One commentator recommended the elimination of the high altitude transponder category on the ground that there is no technical justification for requiring a higher power output for transponders in aircraft operating at altitudes above 15,000 feet. The FAA does not agree. A power output, greater than that required in the low altitude transponder, provides assurance that aircraft that operate at high altitude, and at great horizontal distance from the receiving station will show up on the air traffic controller's scope.

A comment was received suggesting that air traffic controllers should be instructed as to the difference in capabilities of low and high altitude transponders, and that pilots should be required to inform air traffic controllers as to the type of transponder installed on his aircraft. However, since the proposed operating rules require the use of a transponder appropriate to the type of operations intended, the FAA does not believe that there is a need to require pilots to inform air traffic controllers as suggested.

The FAA does not agree with a suggestion made by several commentators that the environmental test requirements be revised to include Option C of Part One in Section III of RTCA Document DO–144. The RTCA option suggests that the manufacturer, as a minimum, should state the range of temperature and altitude over which his equipment is capable of operating. Proposed § 37.180(a)(2) (renumbered as subparagraph (a)(3) in this amendment) specifies these conditions and, in addition, humidity, shock, vibration, and power input voltage. Due to the wide range of environments in which general aviation aircraft operate, the minimum environmental conditions specified in Option C of Part One of Section III of RTCA Document DO–144 are insufficient to insure the required level of reliability.

One commentator requested that operators certificated under Part 135 be permitted to use any class of complying ATC transponders since certain operating limitations placed on Part 135 operators are not applicable to air carriers. The FAA does not agree. The limitations mentioned by the commentator are not related to the capability of the type of transponder used, and the reasons which justify the proposed requirement for air carriers are equally applicable to Part 135 operators.

In response to a suggestion that provisions be made for the continued operation of transponders approved under TSO–C74 and TSO–C74a, the proposed operating rules have been revised to permit the approval of operations with such transponders after July 1, 1975, if the applicable performance standards of TSO–C74c and the environmental standards of the TSO under which the equipment was manufactured are shown to be met.

One comment stated that the design tolerance specified in subparagraph II A.5.a. of Part Two in RTCA Document DO–144 are much stricter than would be required in actual usage. The commentator recommended that transponders should not reply to more than 10 percent of the interrogations when the interval between pulses P_1 and P_3 differs from that defined in Appendix A for the mode selected in the transponder by more than ± 15 percent of the nominal specification. The FAA does not agree that the tolerances are much stricter than that required in actual usage. Furthermore, the requirement specified in the proposed TSO is consistent with that required by ICAO for international operations.

One comment recommended that subparagraph II A.5.b. of Part Two in RTCA Document DO–144 not be included in the TSO on the ground that its requirements are duplicated in subparagraph II A.9.b. of that document. To the contrary, however, subparagraph II A.5.b. applies only to the reply capability of the transponder in response to single pulses, while subparagraph II A.9.b. applies to both reply and suppression action to pulses wider than 1.5 microseconds.

The FAA also disagrees with a recommendation that the dead time specified in paragraph II A.6. of Part Two of RTCA Document DO–144 be increased from 125 microseconds to 500 microseconds, thereby reducing transponder live time. The rapid increase in the use of Mode C ground equipment by civil and military facilities requires a high

degree of system reliability to assure that adequate replies are obtained on each interrogation during critical periods. In areas where multiple interrogators operate, high transponder live time is essential for altitude data.

One comment suggested that the test of suppression specified in paragraph II A.7. of Part Two in RTCA Document DO–144 be performed with the received amplitude P_2 greater than the received amplitude of P_1 by 2db, or more, and that the suppression re-initiation period be increased from 2 to 50 microseconds. The FAA does not agree. Due to the effects of lobing caused by reflection from the surface of the earth, the signal levels of P_1 and P_2, which are radiated from different ground antennas at slightly different heights above ground, frequently arrive at the aircraft at equal levels. For suppression of side lobe signals, it is essential that transponders provide suppression action at equal signal levels. In addition, to avoid unacceptable interference with the operations of military facilities, the retention of the 2 microsecond suppression re-initiation period is essential.

In response to a comment that subparagraph II A.8.c. of Part Two in RTCA Document DO–144 could be misinterpreted, a new § 37.180(a)(2)(1), entitled "Exceptions" has been added to the proposed TSO which replaces that subparagraph with a requirement over which the reply characteristics apply.

In reply to another comment recommending the elimination of the requirement of paragraph II A.9. of Part Two in RTCA Document DO–144, an exception has been added as new § 37.180(a)(2)(ii) to relieve the manufacturer from complying with subparagraph II A.9.a. Field testing has shown that transponder squitter due to noise is not a significant problem. The requirement for narrow pulse rejection is not needed if the random triggering and suppression rate requirements of paragraph II A.11. of Part Two in RTCA Document DO–144 are met. On the other hand, service experience and testing indicate that the wide pulse type interference associated with the requirements of subparagraph II A.9.b. does present a problem so that compliance is required.

A comment recommended elimination of the echo suppression and recovery requirement contained in paragraph II A.10. of Part Two in RTCA Document DO–144 on the basis that the problem is caused by inadequate ground equipment. The FAA does not agree. Echoes (multipath signals) caused by signal reflections from terrain and buildings, cause practical problems in transponder operation. Extensive experience in the operation of the Air Traffic Control Radar Beacon System (ATCRBS) has developed a standard desensitization and recovery curve to minimize the multipath effects on the operation of transponders. Moreover, the FAA locates its own traffic control radar receiving stations so as to minimize the number of echoes. However, since it is practically impossible to eliminate all echoes through the geographical location of the ground station, the proposed requirement providing for capability of the airborne equipment to reject that type of signal has been retained.

One commentator objected to the requirement contained in paragraph II A.13. of Part Two in RTCA Document DO–144 on the ground that, in the FAA's planned airborne environment, an interrogation rate of 1,000 per second will seldom be exceeded. It was contended that if the purpose of the requirement is to protect the airborne transmitter from damage due to excessive replies, more straightforward means are available than are contained in paragraph II A.13. The FAA does not agree. The Air Traffic Control Radar Beacon System operates on a common frequency with the military IFF system, and in many areas of the country, the operation of civil and military facilities results in peak interrogation rates exceeding 1,000 per second. Reply rates must be limited in order to provide adequate service to the closer (stronger) interrogators since excessively high rates would result in unacceptable interference to all users.

One commentator, referring to subparagraph II A.16.b.(1) of Part Two in RTCA Document DO–144, asked whether there was any requirement that the transponder's mode switch have any function other than Off, Standby, On, and Altitude Off (i.e., stop transmitting altitude information pulses while still transmitting the Mode C framing pulses and normal Mode A replies). Subparagraph II A.16.b.(1) requires the transponder to respond to Mode C interrogations independently of other modes or codes manually selected. It does not require other modes or codes to be available or selectable.

The FAA does not agree with a comment objecting to the receiver bandwidth limitation contained in paragraph II A.18. of Part Two in RTCA Document DO–144. The commentator contended that those requirements are for the purpose of limiting squitter and suppressions, which is adequately covered by paragraph II A.11. of RTCA Document DO–144. While that assertion may be true for interference originating within the aircraft, paragraph II A.11. does not provide protection from external sources of interference. The only practical means of protecting transponders from interference originating external to the aircraft is by a reasonable limitation on the receiver bandwidth.

One commentator stated that if the TSO is being amended to permit the operation of the Genave PWI system, proposed paragraph 2.7.c.(2) of the "Federal Aviation Standard, Airborne ATC Transponder Equipment" should be changed because the present wording rules out that system. The FAA does not agree. The proposed change was not limited to the Genave PWI system and was worded broadly enough to include all types of external attachments. The maximum allowable dead time of 4.5% should not be reached by the Genave PWI since it does not generate suppression pulses during the alarm mode. ATCRBS side lobe interrogations are considered valid interrogation signals and are not included as part of the 4.5%.

A comment also questioned whether paragraph 2.7.c.(2) of the "Federal Aviation Standard, Airborne ATC Transponder Equipment" applies to internal suppression or if that paragraph requires the use of an external suppression jack on a class 2A transponder. The dead time created by means other than normal interrogations, as stated in paragraph 2.7.c.(2), refers only to external devices such as TACAN, DME, or PWI. The paragraph does not require a manufacturer to provide an external suppression jack. In reply to another question, the proposal does not create any additional environmental categories.

One commentator opposed the 2,500 microsecond and 4.5% duty cycle dead time requirements of proposed paragraph 2.7.c.(2) of the Federal Aviation Standard because the increase in dead time would permit a loss of transponder replies and would impair the accuracy of symbology used in new automated air traffic control systems. The commentator recommended limiting dead time from external sources to no more than 85 microseconds per suppression period at a random repetition rate such that dead time occupies no more than 2.6% of the time. The FAA does not agree. A maximum of 2,500 microseconds dead time per suppression limited to a 4.5% duty cycle will not inhibit more than one reply per beamwidth at a terminal radar (ARTS) installation. The terminal ATCRBS facilities operate at a nominal 18 hits per beamwidth, and an occasional missing reply out of the 18 replies is not believed serious enough to hinder the accuracy of symbology used in new automated ATC systems.

Another comment contended that the requirement of paragraph 2.7.(c) of the Federal Aviation Standard and paragraph II A. of Part Two in RTCA Document DO–144 could be construed to require duty cycle limitations on inputs capable of generating transponder dead time and that an unnecessary burden could result. While the commentator has correctly stated the requirement, the FAA does not agree that the requirement creates an unnecessary burden. The dead time requirement need only be met taking into consideration the foreseeable inputs to the transponder.

One comment, while supporting the use of the TSO system for the approval of transponders, objected to the incorporation of RTCA Document DO–144 into the TSO. The commentator asserted that DO–144 was intended to fulfill a need for approval of the installed system and that its incorporation would result in a TSO that applies an "approval-per-installation philosophy" placing a burden on the manufacturer which would result in a more costly transponder. Apparently the commentator construed the proposed TSO requirement as referring to both Section II and Section III of Part Two in RTCA Document DO–144. The minimum performance standards specified in the TSO requirement are contained only in Section II. Section III merely describes one acceptable method (but not the only method) of determining compliance with those minimum performance standards. Other methods (not necessarily involving installation of the transponder in an aircraft) may be used.

In connection with Section III of Part Two in RTCA Document DO–144, one comment stated that the test condition specified in subparagraph III R.1.d.(4) is unnecessarily severe. The FAA agrees. However, as noted above, Section III merely describes

one acceptable method of determining compliance with the minimum performance standards. If a manufacturer does not choose to use the test condition in subparagraph III B.1.d.(4), he may use any other acceptable test condition, such as repeating the test condition of subparagraph III B.1.d.(2) but with P_2 at the nominal interval following P_3, and combining the interrogation signal set to an interrogation rate of 100 interrogations per second with a non-synchronous single pulse generator operating at 1,000 prf and at an r_f level 10db below that of P_1 and P_3.

Another comment questioned the note following Section III B.1.j.(2) of Part Two in RTCA Document DO–144. An acceptable alternative to that note would be to exclude the intervals between pulses corresponding to a normal Mode 3/A, Mode C, and a side lobe interrogation.

In addition, with reference to RTCA Document DO–144, it should be noted that subparagraphs II A.16.b.(2), (3), (4), (5), and (6) of Part Two of that Document contain standards for ATC transponder equipment systems that incorporate complete altitude reporting capability, including: (1) an analog-to-digital converter, (2) a pressure altitude data source, (3) a capability of reporting pressure altitude, and (4) a correspondence of the reported altitude with the altitude indicated by the aircraft flight altimeter. It was not the intent of the FAA in this rule making action to require ATC transponders to have complete altitude reporting capability. Therefore, the proposal has been revised by adding new §§ 37.180(a)(2)(iii) and (iv) which delete the requirement for compliance with those standards unless the manufacturer elects to provide complete altitude reporting capability. However, the requirement that all transponders reply to Mode C interrogations with framing pulses F_1 and F_2 is retained in order to facilitate the incorporation of complete altitude reporting capability by the transponder users if that capability is required or if the user should desire that feature. The areas of operation in which complete altitude reporting capability will be required, is the subject of the rule making action proposed in Notice 72–12 (37 F.R. 7527).

Following further review of proposed §§ 91.24, 121.345, 127.123, and 135.143, the proposals have been revised to more clearly indicate that ATC transponders may be approved under the TSO system or in conjunction with type certification procedures, or in any manner approved by the Administrator, but in any event they must meet the performance and environment requirements of the applicable TSO standards.

Finally, transponder field tests conducted subsequent to the issuance of Notice 71–10 indicate that a large number of the transponder deficiencies occurring in service could be prevented if the transponder were inspected and adequately maintained. Accordingly, a new § 91.177 is being adopted which requires that after January 1, 1974, ATC transponder equipment installed and used as provided in this amendment must be tested and inspected and found to comply with the maintenance requirements which are being adopted as new Appendix F to Part 43. New § 91.177 applies only to ATC transponders that, under the provisions of § 91.24, § 121.345(c), § 127.123(b), or § 135.143(c), are required to meet the standards specified therein. While this requirement was not proposed in Notice 71–10, the FAA has determined that safety requires that the ATC transponders be inspected annually to assure that they continue to meet the TSO standards. Further delays in implementing this course of action would not be in the public interest. Therefore, this final rule includes inspection and testing requirements for transponders. However, since a compliance date has been established subsequent to the effective date of the amendment, interested persons may submit comments on the new § 91.177 of Part 91 and the new Appendix F to Part 43. The FAA will consider all comments received on or before March 27, 1973, and may further amend the regulations in the light of these comments.

In consideration of the foregoing, Parts 37, 43, 91, 121, 127, and 135 of the Federal Aviation Regulations are amended as follows, effective January 26, 1973.

The amendments are made under the authority of sections 313(a), 601, 603, 604, and 605 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, 1423, 1424, and 1425), and of section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

NOTE.—The incorporation by reference in this document was approved by the Director of the Federal Register on April 16, 1969.

Amendment 127–32

Use of Certificated Land Airports

Adopted: August 12, 1974 Effective: September 14, 1974

(Published in 39 F.R. 29341, August 15, 1974)

The purpose of these amendments to Parts 121 and 127 of the Federal Aviation Regulations is to require domestic, flag, and supplemental air carriers certificated under Part 121, and air carriers certificated under Part 127, when conducting operations governed by those parts, to use only airports certificated under Part 139.

These amendments are based on a Notice of Proposed Rule Making (Notice No. 73–10) issued March 16, 1973, and published in the Federal Register on March 28, 1973 (38 F.R. 8067). Interested persons have been afforded an opportunity to participate in the making of these amendments and due consideration has been given to all comments received in response to that Notice.

Section 121.590 currently requires domestic and flag air carriers operating large aircraft (other than helicopters) to conduct their scheduled operations into regular airports certificated underPart 139. This requirement was consistent with the applicability of Part 139 as originally promulgated. However, effective May 21, 1973, the FAA adopted Amendment No. 139–1 (38 F.R. 9795; April 20, 1973), and broadened the applicability of Part 139 to prohibit any person from operating a land airport serving any CAB-certificated air carrier unless the airport is certificated under Part 139.

As noted in the preamble to Amendment 139–1, the FAA recognized that the additional airports that are required to comply with Part 139 by virtue of Amendment 139–1 would not be able to comply with all of the requirements of Part 139 before the May 21, 1973, effective date. The FAA had determined that those airports were able to conduct a safe operation, and that provisional airport operating certificates, subject to such terms, conditions, and limitations as the Administrator finds are reasonably necessary to assure safety in air transportation, should be issued to those airports pending their compliance with Part 139. Accordingly, a new § 139.12 was added to Part 139 which provisionally certificated for a period of 45 days airports and heliports which, on May 20, 1973, were serving CAB-certificated air carriers conducting only unscheduled operations or operations with small aircraft in order that they might continue to serve such air carriers pending compliance with Part 139. Section 139.12 also provided for the extension of that certification to May 21, 1974, upon the request of the airport operator prior to July 5, 1973, and compliance by the operator with the requirements of that section.

Amendment 139–2 to Part 139 (38 F.R. 17714; July 3, 1973) amended § 139.12 by extending from July 5, 1973, to October 5, 1973, the time within which persons, who on May 20, 1973, were operating an airport or heliport serving a CAB-certificated air carrier conducting only unscheduled operations or operations with small aircraft, might apply for an extension of their airport operating certificate, and to extend the time for filing the reports required by holders of these certificates. Amendment 139–3 to Part 139 (38 F.R. 27294; October 2, 1973) extended the time for application and the filing of reports from October 5, 1973, to December 15, 1973, for the reasons stated herein.

Amendment 139–4 to Part 139 (38 F.R. 34461; December 4, 1973) extended the December 15, 1973, date for application and the date for filing of reports to April 2, 1974, and Amendment 139–5 (39 F.R. 11929; April 1, 1974) further extended the date for submitting the schedule for compliance, and extended the certificate termination date to December 15, 1974.

Accordingly, as explained in Notice 73–10, the FAA considers it necessary in the interest of safety in air transportation to amend Parts 121 and 127 to be consistent with the safety objectives of Part 139 and the broadening of its applicability by Amendment 139–1, by requiring air carriers certificated under Parts 121 and 127 to use airports certificated under Part 139. This amendment applies to all air carrier operations governed by Part 121 regardless of the size of the aircraft used in the operation. It is to be noted that charter operations are also included as they, too, are governed by Part 121.

Upon further consideration of the proposal in Notice 73–10, in light of comments received, the FAA has concluded that since air taxi operators conducting operations under a CAB approved route substitution agreement do not hold CAB certificate authority, it is not appropriate to restrict those operations to airports certificated under Part 139. Accordingly, that part of the proposal is not adopted in this amendment.

As adopted herein, § 121.590 will prohibit a domestic, flag, or supplemental air carrier, and an air carrier certificated under Part 127, in the conduct of operations governed by Part 121, from operating an aircraft into a land airport in the United States or any territory or possession, unless that airport is certificated under Part 139.

It will be noted that a provision has been added in paragraph (b) of § 121.590 which clearly provides for the applicability of that section to helicopter and small airplane operations.

In addition, it should be pointed out that § 121.590 applies only when the particular operation of the aircraft is governed by Part 121. That section will not, therefore, require the use of an airport certificate under Part 139 for those aircraft operations that are governed by Part 91 rather than Part 121, as in the case of training, ferry, and test flights.

As proposed and adopted herein, § 121.590 explicitly permits the designation and use, as a required alternate airport for departure or destination, an airport that is not certificated under Part 139. All other airports, must be certificated in accordance with Part 139.

The applicability of § 121.590 has been changed from the proposal to include air carriers certificated under Part 127 for schedule helicopter operations, since they are governed by the provisions of §§ 121.3(g) and 121.5 when conducting charter flights or other special services.

In addition, this amendment adds a new § 127.218 to Part 127 as proposed in the Notice.

These amendments are issued under the authority of sections 313(a), 601, and 604 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, and 1424), and section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

In consideration of the foregoing, Parts 121 and 127 of the Federal Aviation Regulations are amended, effective September 14, 1974.

Amendment 127–33

Airworthiness Review Program

Amendment No. 3: Miscellaneous Amendments

Adopted: December 13, 1976 Effective: February 1, 1977

(Published in 41 FR 55454, December 20, 1976)

The purpose of these amendments is to update and improve—(1) the aircraft, engine, and propeller certification regulations; (2) the operating regulations containing airworthiness standards; and (3) related procedural requirements.

These amendments are based on a notice of proposed rule making (Notice 75–10) published in the FEDERAL REGISTER on March 7, 1975 (40 FR 10802) and are the third in a series of amendments to be issued as part of the First Biennial Airworthiness Review Program. The following series of amendments have previously been issued as part of this Airworthiness Review Program:

Title	*Federal Register citation*
Form number and clarifying revisions	(40 F.R. 2576; Jan. 14, 1975)
Rotorcraft anticollision light standards	(41 F.R. 5290; Feb. 5, 1976)

Interested persons have been afforded an opportunity to participate in the making of these amendments and due consideration has been given to all matter presented. A number of substantive changes and changes of an editorial and clarifying nature have been made to the proposed rules based upon the relevant comments received and upon further review within the FAA. Except for the minor editorial and clarifying changes and the substantive changes discussed hereinafter, these amendments and the reasons therefore are the same as those contained in Notice 75–10.

After issuing Notice 75–10, the following six additional notices of proposed rule making were issued as part of the First Biennial Airworthiness Review Program.

Notice No.	*Federal Register citation*	*Title*
75–19	40 F.R. 21806; May 19, 1975.	Notice No. 3: Powerplant Proposals.
75–20	40 F.R. 22110; May 20, 1975.	Notice No. 4: Equipment Deviation List.
75–23	40 F.R. 23048; May 27, 1975.	Notice No. 5: Equipment and Systems Proposals.
75–25	40 F.R. 24064; June 9, 1975.	Notice No. 6: Flight Proposals.
75–26	40 F.R. 24802; June 10, 1975.	Notice No. 7: Airframe Proposals.
75–31	40 F.R. 29410; July 11, 1975	Notice No. 8: Aircraft, Engine, and Propeller Airworthiness, and Procedural Proposals.

Based upon further review by the FAA, a number of proposals which were contained in Notice 75–10 are not being dealt with herein but will be considered in conjunction with other proposals contained in one of the later Airworthiness Review Program Notices of proposed rule making.

The following discussion is keyed to the like-numbered proposals contained in Notice 75–10:

Proposal 2–1. One commentator suggested that the proposed change to § 21.33(a) be revised to limit the new aircraft engine and propeller inspection and test provisions

to prototypes only. The FAA does not agree. The intent of the proposals was to make the inspection and test requirements in § 21.33(a) compatible for aircraft, aircraft engines, and propellers. The provision applies to the item presented for type certification tests irrespective of whether or not the item is considered a prototype by the applicant for the type certificate. The proposal is therefore, adopted without substantive change.

Proposal 2–2. No unfavorable comments were received on the proposal to amend § 23.23. Accordingly, the proposal is adopted without substantive change.

Proposal 2–3. No unfavorable comments were received on the proposal to amend § 23.141. Accordingly, the proposal is adopted without substantive change.

Proposal 2–4. No unfavorable comments were received on the proposal to amend § 23.143(b). Accordingly, the proposal is adopted without substantive change.

Proposal 2–5. No unfavorable comments were received on the proposal to amend § 23.145. Accordingly, the proposal is adopted without substantive change.

Proposal 2–6. The proposed change to § 23.149(b) concerning the language "without exceptional piloting skill, alertness, or strength" is related to a proposed amendment to § 23.149 that is contained in Airworthiness Review Program, Notice No. 6: Flight Proposals (Notice 75–25; 40 FR 24664; June 9, 1975). The proposed amendment to § 23.149(b) contained in Notice No. 2 is therefore being deferred until final rule making action is taken with respect to the related proposal in Notice 75–25. Comments submitted for Proposal 2–6 will be considered at that time.

Proposal 2–7. Although no unfavorable comment was received on the proposal to amend § 23.175(c), the FAA believes that clarification is necessary. The term "or thrust" has been added to the end of the language "maximum cruising power" in proposed § 23.175(c)(3). Proposed § 23.175(c)(4) was intended to clarify the requirement concerning trim speed, but the FAA believes the conflict in language with a similar provision in § 23.175(b)(2)(iii) may cause confusion. Therefore, proposed § 23.175(c)(4) is withdrawn.

Proposal 2–8. The proposed change to § 23.253(b) is related to a proposed amendment to § 23.253(b)(3) that is contained in Airworthiness Review Program, Notice No. 8: Aircraft, Engine, and Propeller Airworthiness, and Procedural Proposals (Notice 75–31; 40 FR 29410 July 11, 1975). The proposed amendment to § 23.253(b) contained in Notice No. 2 is therefore being deferred until final rule making action is taken with respect to the related proposal in Notice 75–31. Comments submitted for Proposal 2–8 will be considered at that time.

Proposal 2–9. No unfavorable comments were received on the proposal to amend § 23.397. Accordingly, the proposal is adopted without substantive change.

Proposal 2–10. No unfavorable comments were received on the proposal to add a new § 23.479(d). Accordingly, the proposal is adopted without substantive change.

Proposal 2–11. One commentator objected to the proposed use of the language "materials used for parts, the failure of which could adversely affect safety" in place of the language "materials used in the structure" in §§ 23.603(a) and 25.603. The FAA does not agree with the commentator's suggestion that all parts of the airplane should, unless specifically excluded, be considered structure. The FAA believes that consideration of the suitability and durability of materials used should be broadened to include parts not normally considered airplane structure.

Proposal 2–12. No unfavorable comments were received on the proposal to amend § 23.607. Accordingly, the proposal is adopted without substantive change.

Proposal 2–13. A commentator questioned whether proposed § 23.675 would require that stops provided to limit the range of motion of an aerodynamic surface be located only on the aerodynamic surface or whether the stop could be located adjacent to the surface. Section 23.675, as proposed and as adopted herein, without change, requires that stops positively limit the range of motion of moveable aerodynamic surfaces. This can be accomplished by locating the stop on structure adjacent to the surface.

Proposal 2–14. No unfavorable comments were received on the proposal to amend § 23.685(a). Accordingly, the proposal is adopted without substantive change. See proposal 2–109.

Proposal 2–15. No unfavorable comments were received on the proposal to add a new § 23.733(c). Accordingly, the proposal is adopted without substantive change.

Proposal 2–16. No unfavorable comments were received on the proposed new § 23.787(f). However, one commentator pointed out that the word "contract" in the proposal as printed in the Federal Register should be "contact." The proposal has been corrected to eliminate the printing error. The proposal has also been clarified based on a comment received on Proposal 2–111, to avoid any implication that lamps will be required in cargo compartments.

Proposal 2–17. One commentator questioned the need in proposed § 23.841(b)(6) for a warning indicator at the pilot station to indicate when a cabin pressure altitude of 10,000 feet is exceeded. But as noted by the commentator it is a general industry practice to provide this warning at a cabin altitude of 10,000 feet. The FAA believes that due to the larger number of small airplanes having such awarning many pilots may come to rely on the warning at this cabin altitude. The proposal is therefore adopted without substantive change.

Proposal 2–18. The proposed changes to §§ 23.853, 27.853, and 29.853 concerning the certification requirements necessary to permit smoking in certain aircraft categories are related to proposed standards for § 25.853. The amendments proposed for § 25.853 are contained in Airworthiness Review Program Notice No. 2: Miscellaneous Proposals (Notice 75–10; 40 FR 10802; March 7, 1975) and in Airworthiness Review Program Notice No. 8: Aircraft, Engine, and Propeller Airworthiness, and Procedural Proposals (Notice 75–31; 40 FR 29410; July 11, 1975). The proposals for § 25.853 in Notice 75–10 is being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–31. The proposed amendments to §§ 23.853, 27.853 and 29.853 contained in Notice 75–10 are therefore being deferred until final rulemaking action is taken with respect to the related proposal for § 25.853. Comments submitted for Proposals 2–18, 2–114, and 2–160 will be considered at that time.

Proposal 2–19. One commentator suggested a clarification of proposed new § 23.903(b) noting that the language, "must be designed to give reasonable assurance" would be subject to divergent application. The same language is now used in § 25.903(d)(2), and the FAA believes that experience with this provision in transport category type certification has been satisfactory.

One commentator suggested that a provision similar to § 25.903(d)(1) concerning design precautions to minimize hazards to the airplane in the event of an engine rotor failure be included in proposed §§ 23.903(b), 27.903(c), and 29.903(f). Although several airworthiness directives have been issued to prevent the failure of engine rotors in one engine type, the FAA does not believe that a general requirement for §§ 23.903(b), 27.903(c), or 29.903(f) that is identical to § 25.903(d)(1) is necessary at this time.

Proposal 2–20. No unfavorable comments were received on the proposal to amend § 23.933(b). Accordingly, the proposal is adopted without substantive change.

Proposal 2–21. One commentator objected to proposed new § 23.941 concerning airplanes with variable inlet or exhaust system geometry as being unnecessary and unjustified in Part 23. The FAA agrees that this provision should not be added to Part 23 at this time and is therefore withdrawing the proposal.

Proposal 2–22. One commentator suggested that the proposed changes to §§ 23.971 and 23.999 be revised to require a quick actuation drain valve on each fuel tank. The proposal, however, was not to require new drainage outlets but to establish standards for the drains set forth in proposed § 23.971(b) and present § 23.999(a). The FAA does not have sufficient information to indicate that a need exists for a quick actuation drain valve on each fuel tank considering the large number of different types of fuel tanks which are included on Part 23 airplanes and the use of sediment bowls and chambers. The proposal is therefore adopted without substantive change.

Proposal 2–23. One commentator question the proposed requirement in § 23.977 (a)(2) that a turbine engine fuel strainer prevent the passage of any object that could restrict fuel flow or damage any fuel system component. The commentator asserted that a strainer which met this requirement would have an opening so small that ice accumulation with the use of turbine fuels would be a problem. The FAA does not agree. This is identical to the provision in § 25.977(a)(2). Experience with fuel

strainers that would meet the proposed standards in § 23.977(a)(2) has shown that a strainer can prevent the passage of the noted objects and also prevent ice accumulation.

One commentator noted that the clear area of each fuel tank outlet strainer should be at least six times the area of the outlet line instead of five times as proposed in § 23.977(b). This provision is identical to § 25.977(c) and the FAA considers that experience with this requirement in Part 25 has been satisfactory.

Proposal 2–24. The intent of the proposal to add a new § 23.979(e) was to provide strength requirements including load factors, applicable to the airplane defueling system to cover surge pressure during defueling. Upon further review the FAA believes that the proposed amendment is premature. Therefore, the proposal is withdrawn.

Proposal 2–25. No unfavorable comments were received on the proposal to amend § 23.995(d). Accordingly, the proposal is adopted without substantive change.

Proposal 2–26. One commentator suggested that there should be sufficient clearance between the quick actuation drain and other parts of the airplane to allow the fuel sample to be drained into a typical, small container. The FAA believes fuel system drains which meet the proposed requirements of paragraphs(b)(1) and (b)(3) of § 23.999, that the drain discharge clear of all parts of the airplane and that it be readily accessible, will have sufficient clearance to allow a fuel sample to be drained into a small container.

One commentator suggested that the requirement in § 23.999(b)(1)) that the drain must discharge clear of all parts of the airplane, would create unnecessary design and construction restraints. The FAA believes that by coating some airplane surfaces with fuel or by trapping quantities of fuel in certain locations a fire hazard exists. This fire hazard should be limited by this proposal. Further, the FAA believes this requirement can be met without an undue restraint on airplane design.

A commentator asserted that the proposed requirement in § 23.999(b)(3), that the drain valve be either located or protected so that it will not be damaged in the event of a landing with landing gear retracted cannot be justified. The commentator noted that the fuel tanks would be ruptured in such a landing and nothing would be gained if the drain was protected. The FAA disagrees, similar fuel tank installation requirements are set forth in § 23.967 and experience indicates that the fuel system can and should be either located or protected to prevent fuel leakage in such a landing. The FAA does agree that the proposal needs to be clarified to more specifically provide a design specification and has, so modified paragraph (b)(3). Also see Proposal 2–70.

Proposal 2–27. No unfavorable comments were received on the proposal to add a new § 23.1093(c). Accordingly, the proposal is adopted without substantive change.

Proposal 2–28. Proposed § 23.1111(c) was misunderstood by one commentator who asserted that it is not possible to assure the impossibility of failure of the engine lubricating system. The proposal, however, was directed toward the elimination of hazardous contamination of the cabin air assuming a failure of the engine lubricating system. In consideration of the misunderstanding, the language has been revised to emphasize the prevention of hazardous contamination of cabin air system.

Proposal 2–29. Although no unfavorable comment was received on the proposed § 23.1125, the FAA believes that the proposal could misunderstood as to whether use of the heat exchanger would permit or prohibit the passage of exhaust gases through the exchanger when hot air was not being directed to the area where it was intended to be used. The FAA's intention was to require cooling of the exchanger wherever it was in contact with exhaust gases, regardless of its usage status. The proposal is revised to make this clear using the language of §§ 25.1125(a)(3) and 29.1125(a)(3). The FAA believes that the exhaust heat exchange requirements should be paralleled in Parts 23, 25 and 29. Therefore the proposed changes to §§ 25.1125(a)(3) and 29.1125(a)(3) are withdrawn.

Proposal 2–30. No unfavorable comments were received on the proposal to amend § 23.1143. Accordingly, the proposal is adopted without substantive change.

Proposal 2–31. One commentator believed that proposed § 23.1165(e) was unnecessarily restrictive in requiring all ignition systems to be independent of all other electrical systems. The FAA agrees with respect to reciprocating engines since § 33.37 requires a

dual ignition system or an ignition system of equivalent inflight reliability for reciprocating engines and § 23.903 requires each engine installed on small airplanes to be type certificated under Part 33. However, the FAA disagrees with respect to turbine engines since two separate primary electrical circuits are not required in § 33.69. The rule as adopted is applicable to turbine engines installed on small airplanes only.

Proposal 2–32. One commentator objected to the proposal to add a speed warning device for turbopropeller powered airplanes. The FAA believes that due to the characteristics of turbopropeller powered airplanes that make it desirable to operate at the maximum operating limit speed (V_{MO}/M_{MO}), and the increasing preoccupation of pilots with air traffic and other duties which distract them from continuous monitoring of airspeed instruments overspeed conditions can be a problem. Therefore, to insure early warning and thus to make a major portion of the speed margin available for pilot reaction and recovery maneuvers, the amendment requires that the speed warning device must give effective aural warning (differing distinctively from aural warnings used for other purposes) to the pilots whenever the speed exceeds V_{MO} plus 6 knots or $M_{MO}+0.01$.

It should also be noted that the proposal for § 23.1303(d) has been revised to make it like § 25.1303(a)(1) to allow for an air temperature indicator which provides indications that are convertible to free-air temperature.

Proposal 2–33. No unfavorable comments were received on the proposal to amend § 23.1300. Accordingly, the proposal is adopted without substantive change.

Proposal 2–34. One commentator suggested that proposed §§ 23.1322 and 25.1322 concerning warning, caution, and advisory light be revised. The commentator noted that requiring a blue light for position indication was not always appropriate since blue was difficult to see in direct sunlight but was readily distinguishable in heavily shaded installations. The FAA agrees that blue should not be an established standard applicable to all installations. Therefore proposed §§ 23.1322(d), 25.1322(d), 27.1322(d) and 29.1322(d), concerning blue lights, are withdrawn. Also see Proposal 2–82.

Proposal 2–35. The proposed amendments to §§ 23.1325, 25.1325, and 29.1325 concerning the static pressure sources are related to proposed amendments to § 27.1325 that are contained in Airworthiness Review Program, Notice No. 2: Miscellaneous Proposals (Notice 75–10; 40 FR 10812; March 7, 1975) and in Airworthiness Review Program, Notice No. 5: Equipment and System Proposals (Notice 75–23; 40 FR 23048; May 27, 1975). The proposed amendment to § 27.1325 in Notice 75–10 is being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–23. The proposed amendments to §§ 23.1325, 25.1325, and 29.1325 contained in Notice 75–10 are therefore being deferred until final rulemaking action is taken with respect to the related proposed amendments to § 27.1325. Comments submitted for Proposals 2–35, 2–83, and 2–183 will be considered at that time.

Proposal 2–36. One commentator questioned the proposed lead-in for § 23.1331(b). The commentator interpreted the proposal to mean that each instrument must have independent power sources and noted that the explanation did not indicate this to be intended. The FAA agrees that the proposal is not clear, and the proposal is withdrawn.

Proposal 2–37. The proposed change to § 23.1335 concerning the deletion of the section is related to a proposed amendment to § 23.1335 that is contained in Airworthiness Review Program, Notice No. 5: Equipment and Systems Proposals (Notice 75–23; 40 FR 23048; May 27, 1975). The proposed amendment to § 23.1335 contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–23. Comments submitted for Proposal 2–37 will be considered at that time.

Proposal 2–38. No unfavorable comments were received on the proposal to amend § 23.1351. Accordingly, the proposal is adopted without substantive change.

Proposal 2–39. Proposed § 23.1353(f) concerning nickel-cadmium batteries is related to a proposed amendment to § 23.1581 that is contained in Airworthiness Review Program, Notice No. 6: Flight Proposals (Notice 75–25; 40 FR 24064; June 9, 1975). The proposed amendment to § 23.1353 contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–25. Comments submitted for Proposal 2–39 will be considered at that time.

Proposal 2–40. For comments related to the proposed amendment of § 23.1385, see Proposal 2–89.

Proposal 2–41. One commentator suggested that proposed § 23.1411(b)(2) be revised to conform to the language in § 25.1411(b)(2). The FAA, however, believes a more specific standard is appropriate for §§ 23.1411 and 27.1411. Therefore, the proposed amendments to §§ 23.1411 and 27.1411 are adopted without substantive change.

Proposal 2–42. One commentator suggested that the proposed change to § 23.1549 be revised to accommodate horizontal scale powerplant instruments. The FAA agrees, and §§ 23.1549, 27.1549 and 29.1549, as adopted, will provide marking standards appropriate to circular, horizontal and vertical scale powerplant instruments.

Proposal 2–43. The proposed change to § 23.1555 concerning the information requirements of usable fuel in a restricted use fuel tank is related to a proposed amendment to § 23.1581 that is contained in Airworthiness Review Program, Notice No. 6: Flight Proposals (Notice 75–25; 40 FR 24664; June 9, 1975). The proposed amendment to § 23.1555 contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–25. Comments submitted for Proposal 2–43 will be considered at that time.

Proposal 2–44. The proposed change to § 23.1557 concerning the system voltage marking requirement adjacent to its external power connection is related to a proposed amendment to § 23.1557 that is contained in Airworthiness Review Program, Notice No. 3; Powerplant Proposals (Notice 75–19; 40 FR 21866; May 19, 1975). The proposed amendment to § 23.1557 contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–19. Comments submitted for Proposal 2–44 will be considered at that time.

Proposal 2–45. The proposed change to § 23.1581 concerning the Airplane Flight Manual is related to a proposed amendment to § 23.1581 that is contained in Airworthiness Review Program, Notice No. 6: Flight Proposals (Notice 75–25; 40 FR 24664; June 9, 1975). The proposed amendment to § 23.1581 contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related Proposal in Notice 75–25. Comments submitted for Proposal 2–45 will be considered at that time.

Proposal 2–46. The proposed change to § 23.1587(a)(2) is related to proposed amendments to § 23.1587 that were contained in Airworthiness Review Program, Notice 6: Flight Proposals (Notice 75–25; 40 FR 24664; June 9, 1975). The proposed amendment to § 23.1587 contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–25. Comments submitted for Proposal 2–46 will be considered at that time.

Proposal 2–47. One commentator suggested that considering the proposed deletion of §§ 25.45 through 25.75, current § 25.161(e) will need to be amended to replace the reference to § 25.69. The FAA agrees, and § 25.161(e)(1) is amended by striking the reference to § 25.69 and inserting in place thereof a reference to § 25.123(a). In addition, the FAA has found that § 25.201(c)(1) refers to § 25.49(c)(2)(i) that would also be deleted. Therefore, § 25.201(c)(1) as amended strikes the phrase "§ 25.49(c)(2)(i) for reciprocating engine powered airplanes, or in" and the phrase "for turbine engine powered airplanes".

Proposal 2–48. No unfavorable comments were received on the proposed change to strike the words "turbine powered" from § 25.101(a). Accordingly, proposed § 25.101(a) is adopted without substantive change.

No unfavorable comments were received on proposed § 25.101(b) and it is adopted as proposed except that it is clarified to indicate that the 80% relative humidity for reciprocating engines is based on standard atmospheric temperature (the vapor pressure values in the table in proposed § 25.101(b)(2) correspond to 80% relative humidity with a standard atmosphere).

Proposal 2–49. Based on comments received on the proposal to amend § 25.105 and on the related proposals to §§ 25.125, 25.241 and 25.1533(c), and upon further review by the FAA, Proposals 2–49, 2–51, 2–52 and the portion of 2–93 dealing with the new operating limitation requirements for transport category airplanes intended to be used in operations on unpaved runways are withdrawn.

Proposal 2–50. No unfavorable comments were received on the proposal to amend § 25.107. Accordingly, the proposal is adopted without substantive change.

Proposal 2–51. For comments related to the withdrawal of the proposed amendment of § 25.125, see Proposal 2–49.

Proposal 2–52. For comments related to the withdrawal of the proposal to add a new § 25.241, see Proposal 2–49.

Proposal 2–53. No unfavorable comments were received on the proposal to amend § 25.397. Accordingly, the proposal is adopted without substantive change.

Proposal 2–54. For comments related to the proposed amendment of the lead-in of § 25.603, see Proposal 2–11.

Proposal 2–55. No unfavorable comments were received on the proposal to amend § 25.675. Accordingly, the proposal is adopted without substantive change. Also see Proposal 2–13.

Proposal 2–56. No unfavorable comments were received on the proposal to amend § 25.685(a). Accordingly, the proposal is adopted without substantive change. See Proposal 2–109.

Proposal 2–57. No unfavorable comments were received on the proposal to add a new § 25.733(c). Accordingly, the proposal is adopted without substantive change.

Proposal 2–58. One commentator questioned whether the proposed § 25.775(e) would require that there be at least two windshield panels in the windshield for each pilot. The intent of the proposal, however, is to provide at least one windshield panel through which at least one pilot could see if vision was lost through another panel.

Proposal 2–59. Proposed § 25.783(g) concerning integral stairs installed in passenger entry doors that qualify as passenger exits is related to a proposed amendment to § 25.783 that is contained in Airworthiness Review Program, Notice No. 8: Aircraft, Engine, and Propeller Airworthiness, and Procedural Proposals (Notice 75–31; 40 FR 29410; July 11, 1975). The proposed amendment to § 25.783(g) contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–31. Comments submitted for Proposal 2–59 will be considered at that time.

Proposal 2–60. The proposed change to § 25.785 is related to a proposed amendment to § 25.785 that is contained in Airworthiness Review Program, Notice No. 8: Aircraft, Engine, and Propeller Airworthiness, and Procedural Proposals (Notice 75–31; 40 FR 29410; July 11, 1975). The proposed amendment to § 25.785 contained in Notice No. 2 is, therefore, being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–31. Comments submitted for Proposal 2–60 will be considered at that time.

Proposal 2–61. No unfavorable comments were received on the proposed new § 25.787(c). However, based on a comment received on Proposal 2–111, this proposal has been revised to avoid any implication that lamps will be required in cargo compartments.

Proposal 2–62. Four of the five comments received were in favor of the proposal for § 25.815 that would provide for the approval of an aisle width of less than 12 inches, but not less than 9 inches, in transport airplanes with a passenger seating capacity of 10 or less if the aisle width is substantiated by necessary tests. One commentator requested that the proposal be withdrawn because it would result in a reduction in the margin of passenger safety. The FAA disagrees. Service experience with aircraft certificated with less than a 12 inch aisle width in the past has been satisfactory.

Moreover, the FAA will not certificate transport category aircraft with less than a 12 inch aisle width unless the Administrator finds by necessary test that the narrower aisle is safe.

The proposal is adopted without change.

Proposal 2–63. The proposed change to § 25.831 concerning the temperature and ventilation controls for the crew compartment is related to a proposed amendment to § 25.831 that is contained in Airworthiness Review Program Notice No. 5: Equipment and Systems Proposals (Notice 75–23; 40 FR 23048, May 27, 1975). The proposed amendment to § 25.831 contained in Notice No. 2 is therefore being deferred until final

rulemaking action is taken with respect to the related proposal in Notice 75–23. Comments submitted for Proposal 2–63 will be considered at that time.

Proposal 2–64. One commentator recommended that proposed § 25.841(b)(1) be revised to make it clear that the pressure relief function may be combined with the regulating valve. The proposal would delete the requirement that one of the pressure relief valves be a pressure regulating valve, but it would still allow such a design. This was specifically covered in Notice 75–10.

One commentator suggested that the language "passenger or crew compartment" in proposed § 25.841(b)(8) be changed to read "occupiable area in the cabin" to ensure that a pressure sensor is located in the lower deck service compartment. The FAA believes the language "occupiable area in the cabin" does not clarify the proposed requirements. The language "passenger and crew compartment" is not limited to the main deck of the airplane, but includes a lower deck service compartment even though this lower deck service compartment may not be occupied during takeoff and landing. For clarification, the parenthetical "(including upper and lower lobe galleys)" has been added to § 25.841(b)(8) as adopted.

Proposal 2–65. The proposed change to § 25.853 concerning the certification requirements necessary to permit smoking in transport category airplanes is related to a proposed amendment to § 25.853 that is contained in Airworthiness Review Program, Notice No. 8; Aircraft, Engine and Propeller Airworthiness, and Procedural Proposals (Notice 75–31, 40 FR 29410; July 11, 1975). The proposed amendment to § 25.853 contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–31. Comments submitted for Proposal 2–65 will be considered at that time.

Proposal 2–66. No unfavorable comments were received on the proposal to amend § 25.933(b). Accordingly, the proposal is adopted without substantive change.

Proposal 2–67. A commentator suggested that a cross-reference to § 25.143 should be added to proposed § 25.941. The FAA agrees that the pilot strength limits now set forth in § 25.143 should be referenced in § 25.941 in order to define appropriately what constitutes "exceptional strength on the part of the pilot". Accordingly, a paragraph (c) has been added to proposed § 25.941 for that purpose.

Proposal 2–68. Two commentators agreed with the intent of the proposed § 25.951(a) concerning fuel system design and operation of the auxiliary power unit (APU) but requested that it be withdrawn to allow time to review other Part 25 provisions for applicability to APU installations. The FAA does not believe that a further review of Part 25 should in this case, delay completion of this rulemaking action. However, if the FAA determines that the language "auxiliary power unit" should be specifically set forth in other provisions to avoid misinterpretation, the FAA will take action to clarify these provisions.

One commentator stated that the fuel system for an APU operated on the ground would be unnecessarily subject to the same requirement as the engine fuel system. The FAA does not agree that this is necessary. If certain operating conditions are the same for both the engine fuel system and the APU fuel system, the FAA believes that the requirements during such periods should be the same. The proposal is therefore adopted without substantive change.

Proposal 2–69. One commentator suggested that the language "proof and ultimate factors" in the proposal for new paragraphs (d) and (e) of § 25.979 be revised to be consistent with § 25.301. The FAA agrees that the terminology should be consistent and the section as adopted is reworded to use the term ultimate load.

One commentator questioned whether the design criteria for the pressure fueling system was applicable to fuel tanks and fuel tank vents. The proposed amendment to § 25.979 was not intended to apply to fuel tanks and vents. The section as adopted has been revised to make this clear.

Proposal 2–70. Several commentators questioned the meaning of the term "quick actuation drain valve" in proposed § 25.999(b)(3). The FAA agrees that the term may be subject to misinterpretation and that the provision is complete without the words "quick actuation".

One commentator asserted that the proposed requirement in § 25.999(b)(3) that the drain valve not be damaged in the event of a landing with landing gear retracted was not a proper design specification since damage was beyond the control of the manufacturer. The FAA agrees that the language "so that it will not be damaged" is not proper for this requirement, but the FAA believes that the valve, the location of the valve, or both, can be designed to prevent fuel spillage, assuming that a landing is made with the landing gear retracted. The section as adopted has been revised to clarify this intent.

Proposal 2–71. One commentator suggested that proposed § 25.1027(d) be revised to limit the design consideration to sludge or other foreign matter entering the feathering system from the oil tank. The FAA disagrees. Design consideration and flexibility should not be limited to preventing entry of material into the feathering system. All sources of sludge and foreign matter must be considered since the purpose of the regulation is the safe operation of the propeller feathering system. The proposal, therefore is adopted without substantive change.

Proposal 2–72. One commentator suggested that the word "critical" be added before the language "ground, water, and flight operating conditions" in the proposal for § 25.1041, but no reason was given. As noted in the explanation to this proposal, § 25.1041 contains a general cooling requirement, while §§ 25.1043 and 25.1045 are more specific with respect to the type of operating conditions which must be considered during tests. Critical conditions are included in the test requirements of §§ 25.1043 and 25.1045. However, the FAA believes that cooling provisions must be adequate under all ground, water, and flight operating conditions.

Proposal 2–73. No unfavorable comments were received on the proposal to amend § 25.1091(c)(2). Accordingly, the proposal is adopted without substantive change.

Proposal 2–74. One commentator agreed with the proposal for § 25.1093 but suggested that the proposal be changed to agree with the format of the previous paragraphs. The FAA agrees, and the proposal as adopted has been structured the same as the previous paragraphs.

Proposal 2–75. One commentator objected to the proposed lead-in for § 25.1125 that limited the applicability of the section to reciprocating engines. The FAA does not believe that the requirements of this section are applicable to other than reciprocating engine powered airplanes. While some early turbine powered airplanes have had an ejector installation in the exhaust stream to pull cooling air through the nacelle, the FAA does not consider this to be an exhaust heat exchanger within the meaning of the language of § 25.1125. Therefore, the proposed lead-in for § 25.1125 is adopted without substantive change.

Proposed § 25.1125(a)(3) is withdrawn. For a discussion of the withdrawal, see Proposal 2–29.

Proposal 2–76. A commentator stated that the phrase "automatically controlled with relation to the amount of power produced by the engine" in proposed § 25.1143(d) is not appropriate for all fluid injection systems. The FAA agrees that the phrase is not appropriate for certain turbine engine powered airplanes and that further revision of § 25.1143(d) should be considered. Proposed § 25.1143(d) has therefore been withdrawn for further study.

No unfavorable comment was received concerning proposed § 25.1143(e) and this paragraph has been adopted without substantive change.

Proposal 2–77. No unfavorable comments were received on the proposal to add a new § 25.1167. Accordingly, the proposal is adopted without substantive change.

Proposal 2–78. No unfavorable comments were received on the proposal to amend § 25.1197(a). Accordingly, the proposal is adopted without substantive change.

Proposal 2–79. One commentator suggested that proposed § 25.1303(a)(2) be revised to clarify the method of clock indication which would be permitted under the regulation. The FAA agrees that the intent of the proposal was only to recognize the development of accurate digital clocks and that the minimum information presented should be the same. Proposed §§ 25.1303(a)(2) and 29.1303(d) as adopted are revised to make this clear.

Proposal 2–80. Several commentators suggested that the proposed change to § 25.1305 be revised to except anti-detonant injection (ADI) systems from the powerplant instrument proposal for fluid augmentation systems. The commentators expressed the opinion that the proposal for § 25.1143(d) concerning automatic controls for fluid injection systems (other than fuel) eliminated the need for a powerplant instrument for the ADI system. The FAA believes that the flight crew should be able to monitor the proper functioning of any fluid system that is used for thrust or power augmentation and the section as adopted is applicable to ADI systems. However, the section has been clarified to ensure application only to fluids systems that are used for thrust or power augmentation.

Proposal 2–81. No unfavorable comments were received on the proposal to amend § 25.1309. Accordingly, the proposal is adopted without substantive change.

Proposal 2–82. One commentator questioned the proposed color standardization of warning, caution, and advisory lights in new § 25.1322. The commentator stated "arbitrary standards for specific light colors cannot always be stated" because of the design objective to minimize red lights that require immediate crew action and of the need to consider past experience, test, crew acceptance, and the specific application. The FAA agrees that considerations other than the need for standardization of light colors may dominate in special circumstances, and the section as adopted provides for approval by the Administrator of light colors that are different than the standard. As stated by the commentator and in the section as adopted, a design objective is to have red warning lights only if a hazard is to be indicated which may require immediate corrective action.

One commentator noted that the language "warning light" is used in other sections of the regulations, such as § 25.812(e)(2), and a hazard which may require immediate corrective action will not be indicated. The FAA does not agree; the light noted in § 25.812(e)(2) should be red in future designs unless otherwise approved by he Administrator. The FAA believes that in other sections, if the language "warning light" is used, it is consistent with proposed new § 25.1322. However, if the language "warning light" is determined to be not generally applicable, later rulemaking action can be instituted.

One commentator suggested a clarification of the lead-in of the proposal to limit its applicability to lights installed in the cockpit as indicated in the explanation to the proposal. The FAA agrees, and the lead-ins of §§ 23.1322, 25.1322, 27.1322, and 29.1322 have been clarified.

Also see Proposal 2–34 for a discussion of the withdrawal of the blue light proposal.

Proposal 2–83. For comments related to the deferral of proposed § 25.1325(g), see Proposal 2–35.

Proposal 2–84. The proposed change to § 25.1329 concerning the redesignation of § 25.1329 as § 25.1311 and the addition of provisions for automatic flight control systems is related to a proposed amendment to § 25.1329 that is contained in Airworthiness Review Program, Notice No. 5: Equipment and Systems Proposals (Notice 75–23; 40 FR 23048, May 27, 1975). The proposed amendment to § 25.1329 contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–23. Comments submitted for Proposal 2–84 will be considered at that time.

Proposal 2–85. Proposed § 25.1331(a)(2) concerning instruments using a power supply is related to proposed amendments to §§ 25.1331 and 25.1333 that are contained in Airworthiness Review Program, Notice No. 5: Equipment and Systems Proposals (Notice 75–23; 40 FR 23048; May 27, 1975). The proposed amendment to § 25.1331(a)(2) contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related proposals in Notice 75–23. Comments submitted for Proposal 2–85 will be considered at that time.

Proposal 2–86. Proposed § 25.1337(a) concerning auxiliary power unit instrument lines is related to a proposed amendment to § 25.1337(a) that is contained in Airworthiness Review Program, Notice No. 3: Powerplant Proposals (Notice 75–19; 40 FR 21896; May 19, 1975). The proposed amendment to § 25.1337(a) contained in Notice No. 2 is therefore deferred until final rulemaking action is taken with respect to the

related proposal in Notice 75–19. Comments submitted for Proposal 2–86 will be considered at that time.

Proposal 2–87. Proposed § 25.1353(c)(5) is related to a proposed amendment to § 25.1585 that is contained in Airworthiness Review Program, Notice No. 6: Flight Proposals (Notice 75–25; 40 FR 24664; June 9, 1975). The proposed amendment to § 25.1353(c)(5) contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–25. Comments submitted for Proposal 2–87 will be considered at that time.

Proposal 2–88. No unfavorable comments were received on the proposal to amend § 25.1355(c). Accordingly, the proposal is adopted without substantive change.

Proposal 2–89. Several commentators suggested that the list of factors to consider for locating forward and rear position lights in proposed §§ 23.1385, 25.1385, 27.1385, and 29.1385 was incomplete.

Two commentators, also suggested that proposed §§ 23.1385(c) and 25.1385(c) be revised to permit a new position light to be installed on each wing tip. The FAA agrees that further study is necessary to develop factors of general applicability for position lights on all aircraft but that a rear position light as far aft as practical on each wing tip of an airplane is a reasonable alternative location. Accordingly, proposed §§ 23.1385(c) and 25.1385(c) have been revised. The proposals concerning the list of factors to be considered for locating forward and rear position lights in § 25.1385 and paralleled in proposed §§ 23.1385, 27.1385, and 29.1385 are withdrawn. However, the deletion of the passing light requirement from current § 25.1385(e) will be made.

Proposal 2–90. One commentator asserted that proposed new § 25.1403 was an operating requirement, not an airworthiness requirement and therefore was not appropriate for Part 25. Although a similar requirement currently exists in § 121.341(b), the FAA believes that such a requirement should be applicable to all newly certificated transport category airplanes.

Two commentators pointed out that the proposal differs from § 121.341(b) in that the proposal was not limited to the area of the wings that are critical from the standpoint of ice accumulation. The FAA agrees, and the section as adopted has been revised accordingly.

A comment was also received that expressed the belief that under the proposal, illumination or other means of ice detection would not be necessary if the wing was shown to have acceptable ice accumulation characteristics. The FAA does not agree. Unless an operating limitation prohibits operations at night in known or forecast icing conditions, the means set forth are required.

Proposal 2–91. Several commentators said that the proposed change to § 25.1439(b)(2)(ii) concerning standards for masks and eye coverings was premature in view of the current testing being conducted on this type of equipment by the FAA. The FAA agrees that this proposed amendment is premature, and new standards are being considered for a later rulemaking action. The proposed change to § 25.1439(b)(2)(ii) is therefore withdrawn.

No favorable comments were received on the proposal to amend paragraph (a) of § 25.1439. Accordingly, the proposal is adopted without substantive change.

Proposal 2–92. No unfavorable comments were received on the proposal to amend § 25.1515. Accordingly, the proposal is adopted without substantive change.

Proposal 2–93. No unfavorable comments were received on the proposal to amend the heading of § 25.1533 and on the proposal to amend § 25.1533(a). Accordingly, this amendment is adopted without substantive change. For comments related to the withdrawal of the proposed new § 25.1533(c), see Proposal 2–49.

Proposal 2–94. The proposed change to § 25.1549 concerning the marking requirements for powerplant instruments is related to a proposed amendment to § 25.1549 that is contained in Airworthiness Review Program, Notice No. 3: Powerplant Proposals (Notice 75–19; 40 FR 21806; May 19, 1975). The proposed amendment to § 25.1549 contained in Notice No. 2 is therefore deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–19. Comments submitted for Proposal 2–94 will be considered at that time.

Proposal 2–95. One commentator took exception to the proposed deletion of the requirement for marking fuel and oil tank capacities at the filler openings in § 25.1557(b). The FAA believes this method of providing the usable fuel tank capacity and the oil tank capacity is no longer necessary. The pilot has the fuel quantity gage and the Airplane Flight Manual, and the servicing personnel usually have no interest in the usable fuel tank capacity. The determination of oil level in oil tanks is usually accomplished with the dipstick. Accordingly, the proposal is adopted without substantive change.

Proposal 2–96. The proposed change to § 25.1581 concerning the Airplane Flight Manual is related to proposed amendment § 25.1581 that is contained in Airworthiness Review Program, Notice No. 6: Flight Proposals (Notice 75–25; 40 FR 24664; June 9, 1975). The proposed amendment to § 25.1581 contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–25. Comments submitted for Proposal 2–96 will be considered at that time.

Proposal 2–97. No unfavorable comments were received on the proposal to amend § 25.1583. Accordingly, the proposal is adopted without substantive change.

Proposal 2–98. The proposed change to § 25.1587 concerning performance information is related to a proposed amendment to § 25.1587 that is contained in Airworthiness Review Program, Notice No. 6: Flight Proposals (Notice 75–25; 40 FR 24664; June 9, 1975). The proposed amendment to § 25.1587 contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–25. Comments submitted for Proposal 2–98 will be considered at that time.

Proposal 2–99. Two commentators questioned the applicability of proposed § 27.25(c) concerning a total weight that was greater than the maximum weight established under § 27.25(a) and noted that a clarification of the applicable flight requirements was needed. The FAA agrees that proposed § 27.25(c) should be clarified. Proposed §§ 27.25(c) and 29.25(c) are intended to provide only a total weight standard for approving the rotorcraft structure for rotorcraft that will be operated under Part 133. Proposed §§ 27.25(c) and 29.25(c) as adopted have been revised to clarify this intent.

Proposal 2–100. Proposed § 27.65(a)(2)(i) concerning climb gradients for rotorcraft other than helicopters is related to a proposed new § 27.1587(b)(3) that is contained in Airworthiness Review Program, Notice No. 2: Miscellaneous Proposals (Notice 75–10; 40 FR 10802; March 7, 1975). The proposed amendment to § 27.1587 contained in Notice 75–10 is being deferred; see Proposal 2–140. Therefore, the proposed amendment to § 27.65 contained in Notice 75–10 is also deferred until final rulemaking action is taken with respect to the related proposal for § 27.1587. Comments submitted for Proposal 2–100 will be considered at that time.

Proposal 2–101. No unfavorable comments were received on the proposal to amend § 27.141. Accordingly, the proposal is adopted without substantive change.

Proposal 2–102. No unfavorable comments were received on the proposal to amend § 27.173(a). Accordingly, the proposal is adopted without substantive change.

Proposal 2–103. No unfavorable comments were received on the proposal to amend § 27.175(d)(2)(iv). Accordingly, the proposal is adopted without substantive change.

Proposal 2–104. No unfavorable comments were received on the proposal to amend § 27.321(a). Accordingly, the proposal is adopted without substantive change.

Proposal 2–105. No unfavorable comments were received on the proposal to amend § 27.339. Accordingly, the proposal is adopted without substantive change.

Proposal 2–106. Two commentators suggested that the limit pilot torque for rotorcraft twist controls in proposed §§ 27.397(b)(2) and 29.397(b)(2) should be 80 times the radius (R) in inches instead of 133 inch-pounds, as proposed. The FAA agrees that the pilot torque load requirements should be a function of the radius (R). Also the FAA does not expect the radius (R) of any twist control installed on any rotorcraft type certificated in the future to be greater than 133/80 inches. Therefore, the proposals as adopted revise the limit pilot torque load to 80R inch-pounds.

Proposal 2–107. No unfavorable comments were received on the proposal to add a new § 27.563. Accordingly, the proposal is adopted without substantive change.

Proposal 2–108. No unfavorable comments were received on the proposal to amend § 27.603. Accordingly, the proposal is adopted without substantive change.

Proposal 2–109. One commentator disagreed with proposed §§ 27.685(a) and 29.685(a) that would require the consideration of the effects of the freezing of moisture on control systems since §§ 27.685(a) and 29.685(a) currently require that control systems be designed to prevent jamming. While the explanation for this proposal indicated that the freezing of moisture was a common cause of control jamming, the proposal is also directed at preventing chafing and interference caused by the freezing of moisture. Accordingly, the proposals are adopted without substantive change.

Proposal 2–110. No unfavorable comments were received on the proposal to add a new § 27.733(c). Accordingly, the proposal is adopted without substantive change.

Proposal 2–111. Based on a comment received, the proposed change to § 27.787 has been revised to avoid any implication that lamps will be required in cargo compartments.

Proposal 2–112. No unfavorable comments were received on the proposal to add a new § 27.801. Accordingly, the proposal is adopted without substantive change.

Proposal 2–113. Several commentators stated that the ditching emergency exit standards proposed for §§ 27.807(d) and 29.807 should not be applicable to all rotorcraft. The commentators noted that the new standards would unnecessarily penalize rotorcraft that would never be involved in a ditching situation. The FAA agrees that certain rotorcraft may not operate in areas where ditching is a concern. Compliance with the ditching emergency exit standards should not be required for all rotorcraft during type certification. Therefore, the proposals as adopted have been revised to make it applicable only to rotorcraft for which ditching certification is requested. The overhead hatch requirements proposed in new §§ 27.807(d)(2) and 29.807(d)(3) are withdrawn because of the possible hazards associated with a turning main rotor. In addition, the reference in proposed § 27.807(d) to § 27.807(a) has been deleted as unnecessary, and the reference in proposed § 29.807(d) to § 29.807(c) has been deleted as inappropriate.

Proposal 2–114. For comments related to the proposed amendment of § 27.853, see Proposal 2–18.

Proposal 2–115. Upon further FAA review proposed §§ 27.865(a) and 29.865(a) concerning external load attaching means have been revised to preclude the necessity of considering the application of an external load at angles that will not be obtained in service. One commentator objected to the requirement for a manual mechanical control for the quick-release device. The commentator stated that this requirement was too restrictive due to the other standby electrical systems available. The FAA does not agree. Contrary to the commentator's contention the reliability of controls other than manual mechanical controls have not been sufficiently substantiated to permit their use in place of an manual mechanical control.

Proposal 2–116. One commentator objected to the proposals to add new standards concerning turbine engine installations to §§ 27.903 and 29.903 that would be substantively identical to proposed § 23.903(b). The commentator requested that the proposals be withdrawn since helicopter service experience does not indicate that such a standard is necessary and due consideration has not been given to the differences between helicopter and airplane engine control systems. The FAA disagrees. While there are differences between helicopter and airplane engine installations, the FAA believes that the proposals would provide general design requirements relating to engine operating limitations and engine installation requirements and that these engine installation requirements should be paralleled in Parts 23, 27, and 29. Also see Proposal 2–19.

Proposal 2–117. For comments concerning proposed § 27.917(d), see Proposal 2–163.

Proposal 2–118. The proposed change to § 27.927 concerning the torque transmission test is related to a proposed amendment to § 27.927 that is contained in Airworthiness Review Program, Notice No. 3: Powerplant Proposals (Notice 75–19; 40 FR 21866; May 19, 1975). The proposed amendment to § 27.927 contained in Notice No. 2 is therefore deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–19. Comments submitted for Proposal 2–118 will be considered at that time.

Proposal 2–119. No unfavorable comments were received on the proposal to add a new § 27.939(c). Accordingly, the proposal is adopted without substantive change.

Proposal 2–120. No unfavorable comments were received on the proposal to amend § 27.977. Accordingly, the proposal is adopted without substantive change.

Proposal 2–121. Two commentators objected to the proposals to amend §§ 27.999(b) and 29.999(b) to require the installation of quick actuation type drain valves that are readily accessible, which can be easily opened and closed, and is either located or protected so that it will not be damaged in the event of a landing with landing gear retracted. The commentators stated that the requirement to include crash landing consideration is not considered appropriate since there are a great number of other areas which must be covered in crash landing conditions. The proposals, however, would require that the fuel system drain valves be either located or protected so that it will not be damaged in the event of a landing with landing gear retracted. There are no requirements in the proposal for consideration of crash landing conditions.

In consideration of comments discussed under Proposals 2–26, and 2–70, §§27.999(b)(3)(ii) and 29.999(b)(3)(ii), as adopted, have been clarified to more specifically provide a design consideration.

See Proposals 2–26 and 2–70.

Proposal 2–122. No unfavorable comments were received on the proposal to amend § 27.1043(c). Accordingly, the proposal is adopted without substantive change.

Proposal 2–123. No unfavorable comments were received on the proposal to add a new § 27.1093(c). The proposal as adopted has been editorially changed to agree with the format of the current section.

Proposal 2–124. No unfavorable comments were received on the proposal to add a new § 27.1123. Accordingly, the proposal is adopted without substantive change.

Proposal 2–125. No unfavorable comments were received on the proposal to add a new § 27.1143(d), and the proposal is adopted without substantive change. However, the heading of § 27.1143 has been amended to reflect the contents of the section after the adoption of a new paragraph (d).

Proposal 2–126. No unfavorable comments were received on the proposal to amend § 27.1185. Accordingly, the proposal is adopted without substantive change.

Proposal 2–127. For comments related to proposed amendment of § 27.1322, see Proposals 2–34 and 2–82.

Proposal 2–128. The proposed change to § 27.1325 concerning the static pressure sources is related to a proposed amendment to § 27.1325 that is contained in Airworthiness Review Program, Notice No. 5: Equipment and Systems. Proposals (Notice 75–23; 40 FR 23048; May 27, 1975). The proposed amendment to § 27.1325 contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–23. Comments submitted for Proposal 2–128 will be considered at that time.

Proposal 2–129. The proposal for a new § 27.1329 concerning the standards for automatic pilot systems is related to a proposed new § 27.1311 that is contained in Airworthiness Review Program, Notice No. 5: Equipment and System Proposals (Notice 75–23; 40 FR 23048; May 27, 1975). The proposal for § 27.1329 contained in Notice No. 2 is therefore being deferred until final rulemaking is taken with respect to the related proposal in Notice 75–23. Comments for Proposal 2–129 will be considered at that time.

Proposal 2–130. No unfavorable comments were received on the proposal to amend § 27.1351. Accordingly, the proposal is adopted without substantive change.

Proposal 2–131. Proposed § 27.1353(f) concerning nickel-cadmium batteries is related to a proposed amendment to § 27.1581 that is contained in Airworthiness Review Program, Notice No. 6: Flight Proposals (Notice 75–25; 40 FR 24664; June 9, 1975). The proposed amendment to § 27.1353(f) contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–25. Comments submitted for Proposal 2–131 will be considered at that time.

Proposal 2–132. For comments related to the proposed amendment of § 27.1385 and the withdrawal of the proposal, see Proposal 2–89.

Proposal 2–133. No unfavorable comments were received on the proposal to amend § 27.1411. Accordingly, the proposal is adopted without substantive change.

Proposal 2–134. No unfavorable comments were received on the proposal to amend § 27.1415(b). Accordingly, the proposal is adopted without substantive change.

Proposal 2–135. The proposed change to § 27.1545 concerning the V_{so} requirements is related to a proposed amendment to § 27.1505 that is contained in Airworthiness Review Program, Notice No. 6: Flight Proposals (Notice 75–25; 40 FR 24664; June 9, 1975). The proposed amendment to § 27.1545 contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–25. Comments submitted for Proposal 2–135 will be considered at that time.

Proposal 2–136. For comments related to the proposed amendment of § 27.1549, see Proposal 2–42.

Proposal 2–137. No unfavorable comments were received on the proposal to amend § 27.1555(c). Accordingly, the proposal is adopted without substantive change.

Proposal 2–138. No unfavorable comments were received on the proposal to amend § 27.1557(c). Accordingly, the proposal is adopted without substantive change.

Proposal 2–139. The proposed change to § 27.1581 concerning the Airplane Flight Manual is related to a proposed amendment to § 27.1581 that is contained in Airworthiness Review Program, Notice No. 6: Flight Proposals (Notice 75–25; 40 FR 24664; June 9, 1975). The proposed amendment to § 27.1581 contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–25. Comments submitted for Proposal 2–139 will be considered at that time.

Proposal 2–140. The proposed change to § 27.1587 is related to a proposed amendment to § 27.1581 that is contained in Airworthiness Review Program, Notice No. 6: Flight Proposals (Notice 75–25; 40 FR 24664; June 9, 1975). The proposed amendment to § 27.1587 contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–25. Comments submitted for Proposal 2–140 will be considered at that time.

Proposal 2–141. One commentator suggested that the proposed new § 29.25(c) provisions be limited to category B rotorcraft. However no reason for the suggestion was stated. The FAA knows of no reason why the proposed provisions should be limited to category B rotorcraft. One commentator questioned the applicability of proposed new § 29.25(c) and noted that a clarification of the applicable flight requirements was needed. For discussion of this and other comments related to the proposed new § 29.25(c), see Proposal 2–99.

Proposal 2–142. No unfavorable comments were received on the proposal to amend § 29.63. Accordingly, the proposal is adopted without substantive change.

Proposal 2–143. Several commentators recommended that § 29.67(a)(1) be revised by adding the term "at V_{TOSS}" following the words "feet per minute", and by deleting the phrase "without ground effect". Although paragraph (a)(1)(iv) of § 29.67 as proposed defines the speed to be used in meeting the climb requirements of § 29.67(a)(1) as the takeoff safety speed, the FAA does not believe that the term "V_{TOSS}" is appropriate. Also the FAA does not agree that the phrase "without ground effect" should be deleted from § 29.67(a)(1). The FAA requires that all climb performance be conducted outside the influence of ground effect. Accordingly, the proposal is adopted without substantive change.

Proposal 2–144. No unfavorable comments were received on the proposal to amend § 29.71. Accordingly, the proposal is adopted without substantive change.

Proposal 2–145. No unfavorable comments were received on the proposal to amend § 29.75(b)(2). Accordingly, the proposal is adopted without substantive change.

Proposal 2–146. No unfavorable comments were received on the proposal to amend § 29.141. Accordingly, the proposal is adopted without substantive change.

Proposal 2–147. No unfavorable comments were received on the proposal to amend § 29.173(a). Accordingly, the proposal is adopted without substantive change.

Proposal 2–148. No unfavorable comments were received on the proposal to amend § 29.175(d)(2)(iv). Accordingly, the proposal is adopted without substantive change.

Proposal 2–149. For comments related to the proposed amendment of § 29.397, see Proposal 2–106.

Proposal 2–150. No unfavorable comments were received on the proposal to add a new § 29.563. Accordingly, the proposal is adopted without substantive change.

Proposal 2–151. No unfavorable comments were received on the proposal to amend § 29.603. Accordingly, the proposal is adopted without substantive change.

Proposal 2–152. For comments related to the proposed amendment of § 29.685(a), see Proposal 2–109.

Proposal 2–153. No unfavorable comments were received on the proposal to add a new § 29.733(c). Accordingly, the proposal is adopted without substantive change.

Proposal 2–154. The proposed change to § 29.783 concerning the requirements applicable to "airstair doors" in transport category rotorcraft is related to proposed amendments to § 25.783 that are contained in Airworthiness Review Program, Notice No. 2: Miscellaneous Proposals (Notice 75–10; 40 FR 10802; March 7, 1975) and in Airworthiness Review Program, Notice No. 8: Aircraft, Engine, and Propeller Airworthiness, and Procedural Proposals (Notice 75–31; 40 FR 29410; July 11, 1975). The proposed amendment to § 25.783 contained in Notice 75–10 is being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–31. The proposed amendment to § 29.783 contained in Notice 75–10 is therefore being deferred until final rulemaking action is taken with respect to the related proposal for § 25.783. Comments submitted for Proposal 2–154 will be considered at that time.

Proposal 2–155. No unfavorable comments were received on the proposed new § 29.787(d). However, based on a comment received on Proposal 2–111, this proposal has been revised to avoid any implication that lamps will be required in cargo compartments.

Proposal 2–156. No unfavorable comments were received on the proposal to add a new § 29.801. Accordingly, the proposal is adopted without substantive change.

Proposal 2–157. For comments related to the proposed amendment § 29.807, see Proposal 2–113.

Proposal 2–158. No unfavorable comments were received on the proposal to add a new § 29.813(c). Accordingly, the proposal is adopted without substantive change.

Proposal 2–159. One commentator objected to the proposed change to § 29.815 for the same reasons as presented for the proposed change to § 25.815. The discussion of § 25.815 in Proposal 2–62 deals with this comment.

Proposal 2–160. For comments related to the proposed amendment of § 29.853, see Proposal 2–18.

Proposal 2–161. For comments related to the proposed new § 29.865, see Proposal 2–115.

Proposal 2–162. No unfavorable comments were received on the proposal to amend § 29.903(c)(1). Accordingly, the proposal is adopted without substantive change. For comments related to the proposal to add new standards concerning turbine engine installation, see Proposals 2–19 and 2–116.

Proposal 2–163. The only public comment received in response to proposed §§ 27.917(d) and 29.917(a) recommended that the present language in § 29.917(a) be used but gave no reason for the recommendation. The FAA believes that there should be a positive description of the cooling fans that must be considered as part of the rotor drive system. Accordingly, the proposals are adopted without substantive change.

Proposal 2–164. The proposed change to § 29.927 concerning the torque transmission test time is related to a proposed amendment to § 29.927 that is contained in Airworthiness Review Program, Notice No. 8: Aircraft, Engine, and Propeller Airworthiness, and Procedural Proposals (Notice 75–31; 40 FR 29410, July 11, 1975). The proposed amendment to § 29.927 contained in Notice No. 2 is therefore deferred until final rulemaking section is taken with respect to the related proposal in Notice 75–31. Comments submitted for Proposal 2–164 will be considered at that time.

Proposal 2–165. No unfavorable comments were received on the proposal to amend § 29.931. Accordingly, the proposal is adopted without substantive change.

Proposal 2–166. No unfavorable comments were received on the proposal to add a new § 29.939(c). Accordingly, the proposal is adopted without substantive change.

Proposal 2–167. No unfavorable comment was received on the proposal to amend § 29.951(a). Accordingly, the proposal is adopted without substantive change. Also see proposal 2–68.

Proposal 2–168. No unfavorable comments were received on the proposal to amend § 29.997. Accordingly, the proposal is adopted without substantive change.

Proposal 2–169. Based on comments concerning proposed changes to § 25.979, proposed new paragraphs (d) and (e) of § 29.979 have also been revised. See Proposal 2–69 for a discussion of the amendment to § 25.979.

Proposal 2–170. One commentator objected to the proposal to § 29.999 on the basis that the helicopter accident records do not show "any great number due to operators not draining fuel sumps." The FAA believes that this low accident rate due to water contamination in the fuel exists because most helicopters already use quick actuation drain valves.

On commentator questioned the need for proposed § 29.999(b) noting that current § 29.971(d) appears to have the same requirement. The FAA agrees that current § 29.971(d) would be redundant for fuel tank sump drains and has therefore deleted the standards for the fuel tank slump drain in § 29.971(d).

The fuel drain standards in § 29.999(b) as proposed are applicable to each drain required by § 29.999(a) including the drains prescribed in § 29.971, but to avoid misinterpretation the section as adopted is clarified to specifically note the fuel tank sump drains prescribed in § 29.971.

Also see Proposals 2–26, 2–70, and 2–121.

Proposal 2–171. One commentator stated that proposed § 29.1041(a) should be revised to except "ground use only" auxiliary power units (APU's). The FAA disagrees. APU's that are permitted to operate only on the ground have inadvertently continued to operate in flight. Safe operation of APU's requires consideration of ground, water, and flight operating conditions. The proposal is therefore, adopted without substantive change.

Proposal 2–172. No unfavorable comments were received on the proposals to amend § 29.1043(c). Accordingly, the proposal is adopted without substantive change.

Proposal 2–173. No unfavorable comments were received on the proposal to add a new § 29.1093(c). The proposal as adopted has been editorially changed to agree with the format of the current section.

Proposal 2–174. For comments related to the proposed amendment of § 29.1125, see Proposals 2–29 and 2–75.

Proposal 2–175. No unfavorable comment was received on the proposal to amend § 29.1143 and the proposal is adopted without substantive change. However, the heading of § 29.1143 has been amended to reflect the contents of the section after the addition of a new paragraph (e).

Proposal 2–176. No unfavorable comments were received on the proposal to amend § 29.1165(f). Accordingly, the proposal is adopted without substantive change.

Proposal 2–177. Two commentators objected to the selective use of Part 33 requirements in the proposal for a new § 29.1167 that would provide substantiation requirements for accessory gearboxes that are not certificated as part of an engine. The FAA proposed to amend Part 29 like Part 25 for consistency. The FAA now believes that the proposed new § 29.1167 is inappropriate in view of the requirements to substantiate the rotor drive system including gearboxes under the rotor drive system endurance test requirements. Therefore, proposed new § 29.1167 is withdrawn.

Proposal 2–178. No unfavorable comments were received on the proposal to amend § 29.1189(a). Accordingly, the proposal is adopted without substantive change.

Proposal 2–179. No unfavorable comments were received on the proposal to amend § 29.1197(a). Accordingly, the proposal is adopted without substantive change.

Proposal 2–180. For comments related to the proposed amendment of § 29.1303(d), see Proposal 2–79.

Proposal 2–181. No unfavorable comments were received on the proposal to amend § 29.1307. Accordingly, the proposal is adopted without substantive change.

Proposal 2–182. For comments related to proposed amendment of § 29.1322, see Proposals 2–34 and 2–82.

Proposal 2–183. For comments related to the deferral of proposed § 29.1325, see Proposal 2–35.

Proposal 2–184. The proposed change to § 29.1329 concerning automatic pilot systems is related to a proposed new § 29.1311 that is contained in Airworthiness Review Program, Notice No. 5: Equipment and Systems Proposals (Notice 75–23; 40 FR 23048; May 27, 1975)). The proposal for § 29.1329 contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–23. Comments submitted for Proposal 2–184 will be considered at that time.

Proposal 2–185. The proposed change to § 29.1337 concerning the auxiliary power unit instrument lines is related to a proposed amendment to § 29.1327 that is contained in Airworthiness Review Program, Notice No. 3: Powerplant Proposals (Notice 75–19; 40 FR 21866, May 19, 1975). The proposed amendments to § 29.1337 contained in Notice No. 2 is therefore deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–19. Comments submitted for Proposal 2–185 will be considered at that time.

Proposal 2–186. Proposed § 29.1353(c)(5) concerning nickel-cadium batteries is related to a proposed amendment to § 29.1585 that is contained in Airworthiness Review Program, Notice No. 6: Flight Proposals (Notice 75–25; 40 FR 24664; June 9, 1975). The proposed amendment to § 29.1353(c)(5) contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–25. Comments submitted for Proposal 2–186 will be considered at that time.

Proposal 2–187. For comments related to the proposed amendment of § 29.1385 and the withdrawal of the proposal, see Proposal 2–89.

Proposal 2–188. The proposal for § 29.1545 concerning the V_{so} requirements is related to a proposed amendment to § 29.1505 that is contained in Airworthiness Review Program, Notice No. 6: Flight Proposals (Notice 75–25; 40 FR 24664; June 9, 1975). The proposed amendment to § 29.1545 contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–25. Comments submitted for Proposal 2–188 will be considered at that time.

Proposal 2–189. For comments related to the proposed amendment of § 29.1549, see Proposal 2–42.

Proposal 2–190. No unfavorable comments were received on the proposal to amend § 29.1555(c). Accordingly, the proposal is adopted without substantive change.

Proposal 2–191. No unfavorable comments were received on the proposal to amend § 29.1557(c). Accordingly, the proposal is adopted without substantive change.

Proposal 2–192. The proposed change to § 29.1581 concerning the Airplane Flight Manual is related to a proposed amendment to § 29.1581 that is contained in Airworthiness Review Program, Notice No. 6: Flight Proposals (Notice 75–25; 40 FR 24664; June 9, 1975). The proposed amendment to § 29.1581 contained in Notice No. 2 is therefore being deferred until final rulemaking action is taken with respect to the related proposal in Notice 75–25. Comments submitted for Proposal 2–192 will be considered at that time.

Proposal 2–193. No unfavorable comments were received on the proposal to amend § 31.1. Accordingly, the proposal is adopted without substantive change.

Proposal 2–194. No unfavorable comments were received on the proposal to amend §§ 31.11 and 31.20. Accordingly, the proposal is adopted without substantive change.

Proposal 2–195. No unfavorable comment was received on the proposal to add a new § 31.14 concerning weight limits of manned free balloons. Therefore, the section is adopted without substantive change.

Proposal 2–196. No unfavorable comments were received on the proposal to amend § 31.45. Accordingly, the proposal is adopted without substantive change.

Proposal 2–197. No unfavorable comments were received on the proposal to add a new § 31.46. Accordingly, the proposal is adopted without substantive change.

Proposal 2–198. No unfavorable comments were received on the proposal to amend § 31.63. Accordingly, the proposal is adopted without substantive change.

Proposal 2–199. No unfavorable comments were received on the proposal to amend § 31.85. Accordingly, the proposal is adopted without substantive change.

Proposal 2–200. No unfavorable comments were received on the proposal to amend § 33.1. Accordingly, the proposal is adopted without substantive change.

Proposal 2–201. No unfavorable comments were received on the proposal to amend § 35.1. Accordingly, the proposal is adopted without substantive change.

Proposal 2–202. No unfavorable comments were received on the proposal to amend § 35.39. Accordingly, the proposal is adopted without substantive change.

Proposal 2–203. No unfavorable comments were received on the proposal to amend § 35.41(e). Accordingly, the proposal is adopted without substantive change.

Proposal 2–204. No unfavorable comments were received on the proposal to amend § 35.45(a). Accordingly, the proposal is adopted without substantive change.

Proposal 2–205. No unfavorable comments were received on the proposal to amend § 91.14. Accordingly, the proposal is adopted without substantive change.

Proposal 2–206. No unfavorable comments were received on the proposal to amend § 91.21(a). Accordingly, the proposal is adopted without substantive change.

Proposal 2–207. One commentator suggested that the proposed change to § 91.33(d)(6) concerning clock requirements should use the language of § 121.305. The FAA believes that a standard should be specified in § 91.33(d)(6) for digital clocks and the proposal as adopted provides a specific standard. See Proposal 2–79.

Proposal 2–208. The intent of the proposed new § 91.193(g) is to require protective breathing equipment that would meet the standards proposed for § 25.1439(b) on certain airplanes operated under Part 91 Subpart D. Based on the current testing being conducted on this type of equipment, the FAA is developing new standards for a later rulemaking action. The proposal for § 25.1439(b)(2)(ii) is being withdrawn (See Proposal 2–91). Therefore, the FAA believes that the proposal for § 91.193 is premature, and the proposal is withdrawn.

Proposal 2–209. Although no unfavorable comment was received on the proposed revision of § 91.209, the FAA believes that revision of similar ice protection provision in § 135.85 may be necessary. Amendments to §§ 91.209 and 135.85 should be considered together. Therefore, the proposed change to § 91.209 is withdrawn.

Proposal 2–210. No unfavorable comments were received on the proposal to amend § 121.171(b). Accordingly, the proposal is adopted without substantive change.

Proposal 2–211. No unfavorable comments were received on the proposal to amend § 121.199. Accordingly, the proposal is adopted without substantive change.

Proposal 2–212. No unfavorable comments were received on the proposal to amend §§ 121.331(b) and 121.333(b). Accordingly, the proposal is adopted without substantive change.

Proposal 2–213. The intent of proposed § 121.337(d) is to require protective breathing equipment that would meet the proposed requirements of § 25.1439(b) installed in certain airplanes operated under Part 121. However, proposed § 25.1439(b)(2)(ii) is withdrawn in this notice. Based on the current testing being conducted on this type of equipment, the FAA is developing new standards for a later rulemaking action. The FAA therefore believes that the proposed change to § 121.337 is premature and the proposal is withdrawn. Also see Proposal 2–91.

Proposal 2–214. No unfavorable comments were received on the proposal to amend § 127.105. Accordingly, the proposal is adopted without substantive change.

Proposal 2–215. No unfavorable comments were received on the proposal to add a new § 127.106. Accordingly, the proposal is adopted without substantive change.

Proposal 2–216. One commentator objected to the proposed amendment to § 133.1. The commentator stated that the proposal specifically eliminates the reference to airworthiness certification rules when, in fact, Subpart D is retained intact except for the standards for external-load attaching means and quick-release devices. The FAA agrees

that reference to airworthiness requirements should not be deleted without other changes to Part 133, and the proposal is withdrawn.

Proposal 2–217. One commentator objected to the proposed amendment to § 133.41 (c)(6). However no reason for the objection was stated. The proposal is therefore adopted herein without substantive change.

Proposal 2–218. One commentator requested that proposed § 133.43(a) be revised to provide for the use of external-load attaching means previously approved under Part 133. The FAA agrees and proposed § 133.43 is revised accordingly.

Proposal 2–219. No unfavorable comments were received on the proposal to amend § 133.45(c). Accordingly, the proposal is adopted without substantive change.

Proposal 2–220. No unfavorable comments were received on the proposal to amend § 135.71(a)(5). Accordingly, the proposal is adopted without substantive change.

Proposal 2–221. Based upon further review by the FAA proposed § 135.165(b)(2) is being withdrawn because contrary to the explanation for the proposal in Notice 75–10, the proposal would result in unjustifiably different standards for transport category airplanes operated under Part 135 and those operated under Part 121.

(Secs. 313(a), 601, 603, 604, and 605 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, 1423, 1424, and 1425); sec. 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

In consideration of the foregoing, and for the reasons stated in Notice 75–10, Parts 21, 23, 25, 27, 29, 31, 33, 35, 91, 121, 127, 133, and 135 of the Federal Aviation Regulations are amended as follows, effective February 1, 1977.

The Federal Aviation Administration has determined that this document does not contain a major proposal requiring preparation of an Inflation Impact Statement under Executive Order 11821 and OMB Circular A–107.

Amendment 127–34

Operations Review Program

Amendment No. 4: Miscellaneous Amendments

Adopted: May 19, 1978 **Effective: June 26, 1978**

(Published in 43 FR 22636, May 25, 1978)

SUMMARY: The purpose of these amendments is to update and improve regulations concerning aircraft maintenance, airmen certification, and general operating and flight rules, parachuting, certification and operation of air carriers and commercial operators, air travel clubs, agricultural aircraft operations, repair stations, and aviation maintenance technical schools. These amendments are part of the Operations Review Program.

FOR FURTHER INFORMATION CONTACT:

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SUPLEMENTARY INFORMATION:

HISTORY

These amendments are the fourth in a series of amendments to be issued as a part of the Operations Review Program. The following series of amendments have previously been issued as part of the Operations Review Program:

Title	*FR Citation*
Clarifying and editorial changes	(41 FR 47227; October 28, 1976)
Rotorcraft External-Load Operations	(42 FR 24196; May 12, 1977 amended by 42 FR 32531: June 27, 1977)
Airspace, Air Traffic and General Operating Rules	(To be issued at a later date)

These amendments are based on a Notice of Proposed Rule Making (Notice 76–28) published in the Federal Register on December 27, 1976. (41 FR 56280). All interested persons have been afforded an opportunity to participate in the making of these amendments and due consideration has been given to all matters presented. A number of substantive changes and changes of an editorial and clarifying nature have been made to the proposed rules based upon relevant comments received and upon further review by the FAA. Except for minor editorial and clarifying changes and the substantive changes discussed below, these amendments and reasons for their adoption are the same as those contained in Notice 76–28.

Five proposals which were contained in Notice 76–28, pertaining to Part 135, Air Taxi Operators and Commercial Operators of Small Aircraft, are not being dealt with here. They will be considered in conjunction with the proposals contained in Part 135 Regulatory Review Program, Notice No. 77–17: Air Taxi Operators and Commercial Operators (42 FR 43490; August 29, 1977).

Amendments to § 121.343(d), § 121.359(e), § 121.703(f), §127.127(d), and § 127.313(f) were not included in Notice 76–28. Since these amendments are editorial changes which reflect the National Transportation Safety Board's revised regulations, they are included in this amendment.

DISCUSSION OF COMMENTS

The following discussion is keyed to the like-numbered proposals contained in Notice 76–28.

Proposal 4–1. One commenter suggested that the word "knowingly" be inserted between "may" and "make" in paragraph (a) of proposed § 43.12 to clarify the intent behind the meaning of the word "fraudulent". The FAA does not believe it is necessary

to add the word "knowingly" since the proof of a fraudulent act is based on the person knowingly committing the act. Accordingly, the proposal is adopted without substantive change.

Proposal 4–2. No unfavorable comments were received on the proposal to revise paragraph (b)(2)) of Appendix E to Part 43. Accordingly, the proposal is adopted without substantive change.

Proposal 4–3. One commenter recommended clarification of the first paragraph of Appendix F to Part 43 which refers to an additional 3 decibel (db) tolerance allowed to compensate for antenna coupling errors during receiver sensitivity measurements. The commenter states this has been interpreted by some to mean ±1½db and by others to mean ±3db. After review, the FAA agrees and the proposed rule is changed by substituting the word "loss" for "tolerance."

After further review of paragraph (a), Appendix F to Part 43, the FAA believes the words "of the system" should be inserted between the words "frequency" and "is" to clarify that the antenna should be used during the transponder frequency check. Accordingly, proposed Appendix F to Part 43 is adopted as proposed except for the revisions discussed above.

Proposal 4–4. One commenter was against extending the effective date of a temporary certificate from 90 days to 120 days and suggested that the FAA's certificate handling facilities should be improved to provide more rapid service. The FAA believes that an addition of 30 days is necessary to handle the numerous applications received and to avoid the need for applicants to obtain renewal of the temporary certificate. The proposed change to § 61.17(a) with respect to inserting the number "120" in place of "90" was also proposed for § 63.13 and § 65.13 (Proposals 4–5 and 4–11 respectively) and commented on as above. Accordingly, proposed §§ 61.17(a), 63.13 and 65.13 are adopted without substantive change.

Proposal 4–5. For a discussion of comments related to the proposal to amend § 63.13 and for the disposition of that proposal, see Proposal 4–4.

Proposal 4–6. A comment was received which discussed matters not proposed in Notice 76–28. This comment is beyond the scope of the Notice and cannot be considered without further notice and public participation. For a discussion of comments related to proposed § 63.41(b) and for the withdrawal of that proposal, see Proposal 4–12.

Proposal 4–7. No unfavorable comments were received on the proposal to delete § 63.53(b) and (c). Accordingly, the proposal is adopted without substantive change.

Proposal 4–8. No unfavorable comments were received on the proposal to amend § 63.57(a) and therefore it is adopted without substantive change. However, the FAA believes the words "any part of" and "except the section on plotting and computing" in § 63.57(b) should be deleted since they are rendered unnecessary by the amendment to § 63.53 (see Proposal 4–7). Accordingly, the words discussed above are deleted from § 63.57(b).

Proposal 4–9. No unfavorable comments were received on the proposal to revise § 63.59(b) or (c) and the proposal is adopted without substantive change. For comments related to proposed § 63.59(a)(2) and deletion of the phrase "in the case of applicant's first failure" in proposed § 63.59(a)(2), see Proposal 4–12.

Proposal 4–10. Although there were no unfavorable comments to the proposed revision of Appendix A of Part 63, the FAA believes the proposal should be withdrawn since a substantial portion of the rule was inadvertently omitted. Accordingly, the proposal to revise Appendix A of Part 63 is withdrawn.

Proposal 4–11. For a discussion of comments relating to the proposal to amend § 65.13 and for the disposition of that proposal, see Proposal 4–4.

Proposal 4–12. Thirty-nine comments objected to the proposed amendments to § 65.19. Many commenters objected to limiting the number of retests to one within 30 days as proposed in § 65.19(b) in case of an applicant's first failure. These commenters stated that this restriction would place an unnecessary burden on applicants by increasing the time for certification without a commensurate increase in benefits or safety. Upon further review, the FAA agrees and the phrase "In the case of an applicant's first failure" in proposed § 65.19(b) is deleted.

The proposed change to § 65.19(b) with respect to the phrase "In the case of an applicant's first failure" is identical to the proposed change to §§ 63.41(b) and 63.59(a)(2) in Proposals 4–6 and 4–9 respectively. Accordingly, the proposed change to § 63.41(b) is withdrawn and the proposed change to § 63.59(a)(2) is amended to delete the above phrase.

Several commenters objected to proposed § 65.19(b) because it denied certified ground instructors the privilege of giving additional instruction to applicants in preparing them for retesting. The commenters stated that ground instructors were the only persons, other than flight instructors, who have been tested on their ability to teach various technical subjects. The FAA does not issue ground instructor ratings which are appropriate to teach air traffic control tower operator, aircraft dispatcher, parachute rigger, or mechanic applicants.

Since aviation safety and public interest demands that only persons who have demonstrated their technical knowledge and skill for a particular certificate should be qualified to provide instruction and certify competency for that certificate, the FAA believes the instructor must possess at least the same certificate and rating that the applicant is seeking to obtain. Accordingly, the proposal to amend § 65.19 is adopted as proposed with the revision discussed above.

Proposal 4–13. One commenter believed § 91.8 should be further expanded to include the prohibition against the interference with flight crewmembers before the aircraft is boarded. Since such a prohibition would be difficult to enforce and could give rise to jurisdictional problems, the FAA does not consider this prohibition a proper subject for rulemaking.

One commenter stated that proposed § 91.8(b) could apply to an aircraft owner who might ask the pilot to alter course or change destination. The commenter suggests clarifying the language. Another commenter expressed concern for the proposed wording of § 91.8(b) since it appears that a pilot examiner would be in violation by asking a private pilot applicant to divert from a course during a flight test. This was not the FAA's intent. The prohibition was directed toward unreasonable requirements, such as hijacking or requiring a change under duress. However, after further review, the FAA believes § 91.8(b) is not necessary since these acts are provided for in § 91.8(a). Accordingly, the proposal is adopted with the revisions discussed.

Proposal 4–14. No unfavorable comments were received on the proposal to revise § 91.15(a)(2). Accordingly, the proposal is adopted without substantive change.

Proposal 4–15. No unfavorable comments were received on the proposal to amend § 91.17. Accordingly, the proposal is adopted without substantive change.

Proposal 4–16. No unfavorable comments were received on the proposal to revise § 91.18(a). Accordingly, the proposal is adopted without substantive change.

Proposal 4–17. No unfavorable comments were received on the proposed revision to § 91.43(b). Accordingly, the proposal is adopted without substantive change.

Proposal 4–18. One commenter disagreed with the proposed revision to § 91.52(d)(2) that would require the new expiration date for replacement (or recharge) of the emergency locator transmitter's battery to be entered in the aircraft maintenance record and suggested the use of a placard located inside the cabin as a better solution. The FAA believes that a maintenance record entry is a more reliable method of determining the replacement date than a placard. Accordingly, proposed § 91.52(d)(2) is adopted without substantive change.

Proposal 4–19. Several commenters contended that proposed § 91.73(d) would be too restrictive and does not allow sufficient discretionary authority to the pilot in command as to when the anticollision lights should or should not be lighted. They state that the use of a strobe light as an anticollision light would create an unsafe condition during certain aircraft operation such as taxiing, takeoff and landing, if the pilot did not have the option to turn it off except during adverse meteorological conditions.

In light of these comments and upon further review, the FAA agrees that there are instances when the use of a high intensity anticollision light could induce vertigo

and cause spatial disorientation. Accordingly, § 91.73(d) is revised to provide that the pilot in command may turn off the anticollision lights at any time in the interests of safety.

Proposal 4–20. One commenter does not believe the word "nearest" in proposed § 91.83(d) conveys the operational procedure presently used by the FAA, and suggested it be changed. In light of this comment, and after further review, the FAA believes that any restrictive term is unnecessary and could possibly discourage the filing of flight plans. Accordingly, the words "the nearest" in proposed § 91.83(d) are deleted and the word "an" inserted.

Proposal 4–21. One commenter objected to the wording of proposed § 91.173 on the ground that it places an unwarranted burden on the owner or operator to determine such items as revision date, airworthiness directive (AD) number, and if an AD involves recurring action, the time and date when the next action is required. The commenter further stated that § 91.173 places responsibility on the owner or operator for the content of Part 43 maintenance record entries made by persons authorized by the FAA.

The FAA believes that the owner or operator should be responsible for the retention of the required maintenance records for the specified periods and furnish such records to the person authorized by the FAA to accomplish the work. The FAA believes that the owner or operator should also ensure that the appropriate information as prescribed in § 91.173 is entered in the maintenance records. The intent of the proposal is to require the retention of more specific information relating to ADS and their compliance. In addition, each person authorized to perform the maintenance is only responsible for the content of the required record entries. Accordingly, the proposed revisions to § 91.173(a), (b), and (a)(2)(v) and the addition of new (b)(3) are adopted without substantive change.

Proposal 4–22. One commenter who supported the proposed § 91.189(b)(5) suggested that attachment points for the lifeline be permanently installed on the wings of the aircraft. The FAA believes current § 25.1411(g) adequately covers lifeline attachment. Accordingly, proposed § 91.189(b)(5) is adopted without substantive change.

Proposal 4–23. The only public comment received on the proposal to amend paragraph 2(a)(7) of Appendix A to Part 91 recommended that radio altimeters be inedluded in the proposed requirement but gave no further explanation. Since radio altimeters have markings at 20 feet or less intervals, the FAA believes that no reason exists at this time to include them in this amendment. Accordingly, the proposal is adopted without substantive change.

Proposal 4–24. No unfavorable comments were received on the proposal to revise § 105.15(b). Accordingly, the proposal is adopted without substantive change.

Proposal 4–25. One commenter supported proposed § 105.33(a) and (b) providing adequate exceptions exist for emergency situations, but did not state what type of exceptions he was referring to.

Another commenter contends that a light should not be displayed during free-fall because such a light decreases night vision and could possibly induce vertigo or spatial disorientation.

The FAA does not believe that such a light would significantly decrease night vision and induce vertigo or spatial disorientation. The FAA believes that a parachute jumper presents an object in the airspace from the instant the jumper exits the aircraft until the jumper reaches the surface. All that changes with the deployment of the chute is the speed the object is falling. A free-fall jump can extend through thousands of feet of airspace, presenting a hazard to air navigation. Accordingly, in the interest of safety, proposed § 105.33(a) and (b) are adopted without substantive change.

Proposal 4–26. No unfavorable comments were received on the proposal to amend § 105.43. Accordingly, the proposal is adopted without substantive change.

Proposal 4–27. No unfavorable comments were received on the proposal to revise § 121.11. Accordingly, the proposal is adopted without substantive change.

Proposal 4–28. No unfavorable comments were received on the proposal to amend § 121.26. Accordingly, the proposal is adopted without substantive change.

Proposal 4–29. No comments were received on the proposal to revise § 121.29(b). After further review, the FAA believes there is no current need for the proposed revision. Accordingly, proposed § 121.29(b) is withdrawn.

Proposal 4–30. No unfavorable comments were received on the proposal to amend § 121.47(a). Accordingly, the proposal is adopted without substantive change.

Proposal 4–31. No comments were received on the proposal to revise § 121.53(e). After further review, the FAA believes there is no current need for the proposed revision. Accordingly, proposed § 121.53(e) is withdrawn.

Proposal 4–32. No favorable comments were received on the proposal to revise § 121.61(b)(1). Accordingly, the proposal is adopted without substantive change.

Proposal 4–33. No unfavorable comments were received on the proposal to amend § 121.135(b)(6) and (7). Accordingly, the proposal is adopted without substantive change.

Proposal 4–34. No unfavorable comments were received on the proposal to amend § 121.191(a). Accordingly, the proposal is adopted without substantive change.

Proposal 4–35. The commenters to proposed § 121.309(b)(4) contend the proposal was unnecessarily redundant, served no useful purpose, and did not enhance safety. The commenters objected to this proposal from the standpoint that it would impose: (1) an unwarranted recordkeeping burden on operators utilizing an equipment control program that is controlled by hours or cycles and not by a specific inspection due date; (2) a risk of not having the inspection dates marked on the containers when equipment items were transferred from one airplane to another; and (3) an additional task of changing inspection dates with possible resultant error.

In light of these comments and after further review, the FAA believes the proposal would possibly impose a burden not commensurate with its probable contribution to safety. Accordingly, proposed § 121.309(b)(4) is withdrawn.

Proposal 4–36. One commenter suggested the use of the phrase "no person" instead of "no passenger or crewmember" in proposed § 121.317(b). The FAA believes the phrase "no passenger or crewmember" is more definitive and the proposed wording is retained. Another commenter objected to the proposal on the grounds that there are instances when it is acceptable for cockpit crewmembers to continue to smoke and stated that this determination should be left up to the discretion of the cockpit crewmembers. The FAA disagrees. As a safety factor, flight crewmembers should be prohibited from smoking when the "no smoking" sign is lighted. Accordingly, proposed § 121.317(a) and (b) is adopted without substantive change.

Proposal 4–37. No unfavorable comments were received on the proposal to amend § 121.401(c). Accordingly, the proposal is adopted without substantive change.

Proposal 4–38. No unfavorable comments were received on the proposal to revise § 127.440(b)(2). Accordingly, the proposal is adopted without substantive change.

Proposal 4–39. Two comments were received on both proposed §§ 121.548 and 127.212 which discussed matters not proposed in Notice 76–28. These comments are beyond the scope of the Notice and cannot be considered without further notice and public participation. Accordingly, proposed § 121.548 and § 127.212 (Proposals 4–39 and 4–54 respectively) are adopted without substantive change.

Proposal 4–40. No unfavorable comments were received on the proposal to amend § 121.651(d)(2). Accordingly, the proposal is adopted without change.

Proposal 4–41. No unfavorable comments were received on the proposal to amend § 121.652(a). However, as stated in the preamble to Notice 76–28, the FAA believes the flight time, in order to be credited, must be acquired in the same "type" airplane. Accordingly, the proposal is adopted by inserting the word "type" to further clarify the intent of the rule.

Proposal 4–42. No unfavorable comments were received on the proposal to amend § 121.697(e)(2). Accordingly, the proposal is adopted without substantive change.

Proposal 4–43. No unfavorable comments were received on the proposal to revise § 121.723(a) and (b). However, in order to avoid the reissuance of certificates at the conclusion of each assignment, the wording is changed so that the certificate is retained

until termination of employment with the carrier or operator. Accordingly, the proposal is adopted with the change discussed.

Proposal 4–44. No unfavorable comments were received on the proposal to add a new § 123.11(b)(3). Accordingly, the proposal is adopted without substantive change.

Proposal 4–45. No unfavorable comments were received on the proposal to add a new § 123.12. Accordingly, the proposal is adopted without substantive change.

Proposal 4–46. No unfavorable comments were received on the proposal to revise § 123.13. Accordingly, the proposal is adopted without substantial change.

Proposal 4–47. No unfavorable comments were received on the proposal to revise § 123.15(a). Accordingly, the proposal is adopted without substantive change.

Proposal 4–48. No comments were received on the proposal to revise § 123.19(c). After further review, the FAA believes there is no current need for the proposed revision. Accordingly, proposed § 123.19(c) is withdrawn.

Proposal 4–49. No unfavorable comments were received on the proposal to revise § 123.27. Accordingly, the proposal is adopted without substantive change.

Proposal 4–50. No unfavorable comments were received on the proposal to revise § 123.41(a)(1). Accordingly, the proposal is adopted without substantive change.

Proposal 4–51. No unfavorable comments were received on the proposal to revise § 127.3. Accordingly, the proposal is adopted without substantive change.

Proposal 4–52. No comments were received on the proposal to revise § 127.21(b). After further review, the FAA believes there is no current need for the proposed revision. Accordingly, proposed § 127.21(b) is withdrawn.

Proposal 4–53. No unfavorable comments were received on the proposal to revise § 127.151(a). Accordingly, the proposal is adopted without substantive change.

Proposal 4–54. For a discussion of comments relating to proposed § 127.212 and for the disposition of that proposal, see Proposal 4–39.

Proposal 4–55. No unfavorable comments were received on the proposal to revise § 127.249(b). Accordingly, the proposal is adopted without substantive change.

Proposals 4–56 through 4–60. These proposals are included in the Part 135 Regulatory Review Notice 77–17: Air Taxi Operators and Commercial Operators (42 FR 43490; August 29, 1977). Comments received on the proposed amendments to Part 135 in Notice 76–28 will be considered in conjunction with other comments received in response to Notice 77–17.

Proposal 4–61. No unfavorable comments were received on the proposal to amend § 137.19(e). Accordingly, the proposal is adopted without substantive change.

Proposal 4–62. No unfavorable comments were received on the proposal to delete Part 149 "Parachute Lofts" and transfer those requirements to a new Subpart E in Part 145. However, after further review, the FAA believes the incorporation of Part 149 into Part 145 as proposed would create redundancy in the rules and cause confusion. Accordingly, the proposal to amend Part 145 is withdrawn.

Proposal 4–63. No unfavorable comments were received on the proposal to revise § 145.17(b). After further review, the FAA believes the words "surrendered, suspended, or," should be reinserted between the words "sooner" and "revoked" in § 145.17(b) since they appear in current § 145.17(b). This oversight is corrected in the adopted rule since it was not a change intended by the proposal. Accordingly, the proposal to revise § 145.17(b) is adopted as proposed except for the revision discussed above.

Proposal 4–64. No unfavorable comments were received on the proposal to amend § 145.59(a). Accordingly, the proposal is adopted without substantive change.

Proposal 4–65. No unfavorable comments were received on the proposal to revise § 147.31(c)(1) and to add a new § 147.31(c)(2). After further review, the FAA believes that the following editorial changes should be made: (1) in the proposed § 147.31(c)(1)(ii) the word "accreditation" is used in place of the word "certification" which appears in current § 147.31(c)(1). This oversight is corrected in the adopted rule since it was not the intent of the proposal to change the wording to accreditation; (2) the phrase "other than the crediting school" immediately following the word "accreditation" in proposed § 147.31(c)(1)(ii) was inadvertantly omitted and has been

included in the final rule. Accordingly, the proposal to revise § 147.31(c)(1) and to add a new § 147.31(c)(2) is adopted as proposed except for the revisions discussed above.

Proposal 4–66. Although there were no unfavorable comments to the proposed deletion and reservation of Part 149, the proposal is withdrawn for the reasons discussed in Proposal 4–62.

DRAFTING INFORMATION

The principal authors of this document are Thomas G. Walenta, Flight Standards Service, and Richard B. Elwell, Office of General Counsel.

ADOPTION OF THE AMENDMENTS

Accordingly, Parts 43, 61, 63, 65, 91, 105, 121, 123, 127, 137, 145, and 147 of the Federal Aviation Regulations (14 CR Parts 43, 61, 63, 65, 91, 105, 121. 123, 127, 137, 145, and 147) are amended as follows, effective June 26, 1978.

(Secs. 313, 314, and 601 through 610 of the Federal Aviation Act of 1958 (49 U.S.C. 1354, 1355, and 1421 through 1430) and Sec. 6(c) of the Department of Transportation Act (41 U.S.C. 1655)).)

NOTE.—The Federal Aviation Administration has determined that this document does not contain a major proposal requiring preparation of an Economic Impact Statement under Executive Order 11821, as amended by Executive Order 11949, and OMB Circular A–107.

Amendment 127–35

Regulatory Review Program; Air Taxi Operators and Commercial Operators

Adopted: September 26, 1978 **Effective: December 1, 1978**

(Published in 43 FR 46742, October 10, 1978)

SUMMARY: These amendments substantially revise requirements for operations by persons holding air taxi/commercial operator (ATCO) operating certificates issued by the FAA. They will result in a higher level of safety and greater operational flexibility. They are necessary to keep the FAA's regulation of this vital segment of the industry consistent with the state-of-the-art from both a technological and operating standpoint. These amendments respond to the demand for commuter and air taxi operators to operate larger and more complex aircraft.

FOR FURTHER INFORMATION CONTACT:

Mr. William J. Sullivan, Chief, Safety Regulations Division, Flight Standards Service, Federal Aviation Administration, 800 Independence Avenue SW., Washington, D.C. 20591, telephone 202–755–8715.

SUPPLEMENTARY INFORMATION:

HISTORY

These amendments are based on Notice of Proposed Rulemaking 77–17 (42 FR 34390; Aug. 29, 1977). Notice 77–17 also included five proposed amendments to current Part 135 originally proposed in Notice 76–28 (41 FR 56280; Dec. 27, 1976). Notice 77–17 also considered and disposed of the petition of Air Illinois, Inc., Golden West Airlines, Inc., and Swift Aire Lines, Inc., to amend Part 135 (Docket No. 15733).

After Notice 77–17 was issued, Notice 77–17A (42 FR 56702; Oct. 27, 1977) withdrew proposed § 135.169(e). The same day, Advance Notice of Proposed Rulemaking 77–25 (42 FR 56702; Oct. 27, 1977) requested comments on possible changes in the certification requirements for certain small airplanes used by air taxi operators and commercial operators. Advance Notice 77–25 will be disposed of in a separate rulemaking action.

All interested persons have been given an opportunity to participate in the making of these amendments and due consideration has been given to all matters presented. Except for the changes discussed below, these amendments and the reasons for their adoption are the same as those stated in Notices 76–28 and 77–17.

* * * * *

PART 127

§ 127.5 *Operation of airplanes having a maximum passenger seating configuration of 30 seats or less and a maximum payload capacity of 7,500 pounds or less.*

Section 127.5 is amended to be consistent with §§ 121.9, 121.11 and revised Part 135 for the reasons just discussed. Current § 127.5(b) is no longer needed since the dates have passed and it is deleted.

* * * * *

NOTE: The complete preamble to Amendment 127–35 is contained in the Revision of FAR Part 135 effective December 1, 1978 (43 FR 46742, October 10, 1978).

DRAFTING INFORMATION

The principal authors of this document are B. L. Abram, L. D. Basham, D. W. Kress, F. E. Kurdys, D. A. Schroeder, W. J. Sullivan, T. G. Walenta, and L. J. Weston, Flight Standards Service, and R. C. Beitel and M. S. Filler, Office of the Chief Counsel.

ADOPTION OF THE AMENDMENTS

Accordingly, Parts 121, 127, and 135 of the Federal Aviation Regulations (14 CFR Parts 121, 127, and 135) and Special Federal Aviation Regulations 23, 30, and 33 are amended, effective December 1, 1978.

(Secs. 313(a), 314(a), 601 through 610, and 1102 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1355(a), 1421 through 1430, and 1502); Sec. 6(c), Department of Transportation Act (49 U.S.C. 1655(c)).)

Amendment 127–36

Delegations of Authority

Adopted: October 31, 1978 **Effective: November 9, 1978**

(Published in 43 FR 52203, November 9, 1978)

SUMMARY: These amendments delegate certain authority of the Administrator of the FAA to officials within the FAA to issue, amend, or repeal: (1) appendices to parts of the Federal Aviation Regulations; (2) technical standard orders; (3) minimum en route IFR altitudes and associated flight data; and (4) standard instrument approach procedures. They also delegate certain authority of the Administrator to: (1) reconsider refusals of applications for amendments to various operating certificates, operations specifications, and airport operations manuals; and (2) reconsider amendments to operations specifications, and airport operations manuals. In addition, these amendments establish procedures for the reconsideration of denials or grants of exemptions. These amendments also delegate authority to the Regional Directors to grant or deny exemptions from the regulations concerning the certification and operations of land airports serving CAB-certificated air carriers. Finally, the amendments delegate the Chief Counsel's authority in connection with the processing of certain rules. This action is taken to provide more timely governmental response and action. These delegations will reduce review levels within the agency with corresponding savings in time, money, and resources.

ADDRESS: Send comments on the procedures in duplicate to:

Federal Aviation Administration,
Office of the Chief Counsel,
Attn: Rules Docket (AGC–24), Docket No. 18434
800 Independence Avenue, S.W.
Washington, D.C. 20591.

FOR FURTHER INFORMATION CONTACT:

Edward P. Faberman, Office of the Chief Counsel, Regulations and Enforcement Division, Federal Aviation Administration, 800 Independence Avenue, S.W., Washington, D.C. 20591; Telephone: (202) 426–3073.

SUPPLEMENTARY INFORMATION:

I. GENERAL

To reduce review levels within rule-making areas that largely involve technical and nonpolicy matters, these amendments delegate certain responsibilities of the Administrator and the Chief Counsel to officials within the FAA and authorize certain other delegations by the Chief Counsel. The reduction of review levels will expedite the rule-making process which will in turn save time, money, and resources and provide more timely governmental response and action. These amendments also establish procedures for the reconsideration of denials or grants of exemptions. The delegations and procedures are accomplished by specific changes to sections of the Federal Aviation Regulations.

II. DESCRIPTION OF AMENDMENTS

A. Authority of "Chief Counsel"

By the addition of a new paragraph (c) to § 11.41, certain authority of the Chief Counsel in processing exemptions under Subpart C of Part 11 (14 CFR Part 11) is delegated to the Assistant Chief Counsel for Regulations and Enforcement. Further, under this paragraph the Chief Counsel may delegate responsibilities in processing petitions for rule making, issuing notices of proposed rule making, and adopting final rules. Section 11.61 of Subpart D (rules and procedures for airspace assignment and use) and § 11.81 of Subpart E (processing of Airworthiness Directives) are amended to delegate to the Assistant Chief Counsel for Regulations and Enforcement the authority of the Chief Counsel in processing rules under these subparts. It should be noted that under the amendment to Subpart C, in contrast to existing Subparts D and E, the Regional Counsel does not act as the Chief Counsel except in processing petitions for exemptions from the requirements of Part 139 (14 CFR Part 139). Further, the last sentence of paragraph (a) of § 11.41 is placed in new paragraph (c) of § 11.41 since new paragraph (c) contains the definitions for the subpart. Finally, paragraph (c) of § 11.53 is deleted since its substance is incorporated in the new paragraph (c) of § 11.41 which relates to the scope of the entire subpart.

B. Appendices to Parts, Technical Standard Orders, Minimum En Route IFR Altitudes and Associated Flight Data, and Standard Instrument Approach Procedures

By amending § 11.49 the head of the Office or Service concerned is delegated the authority to issue, amend, or repeal appendices to parts of the Federal Aviation Regulations. These appendices contain technical details relating to specific sections within the part and they do not involve basic policy considerations. Therefore, the general involvement of the Administrator in regulatory actions related to appendices is not warranted.

Section 11.49 is also amended to delegate the authority to issue, amend, and repeal: (1) technical standard orders; (2) minimum en route IFR altitudes and associated flight data; and (3) standard instrument approach procedures. These delegations were authorized by a document published in 25 FR 6489 (July 9, 1960) and paragraph 802 of Order FSP 1100.1, as amended March 9, 1973. This amendment merely serves to publish these existing delegations in the Federal Aviation Regulations.

C. Reconsideration of Denials or Grants of Exemptions

A new section is added to Part 11 establishing procedures for processing petitions for reconsideration of denials and grants of exemptions. Previously, there has been no prescribed procedure, but normally, reconsideration has been by the Administrator. New § 11.55(a) and (b) codifies this procedure in the Federal Aviation Regulations.

In contrast to the above procedure, new § 11.55(c) provides that, in the case of a petition for reconsideration of a denial of an exemption from the requirements of Part 67 of the Federal Aviation Regulations, (14 CFR Part 67) the petition is to be filed with, and the reconsideration is to be by, the Federal Air Surgeon. The difference in the procedure for reconsideration of denials of Part 67 exemptions is due to the large quantity of Part 67 exemptions requested, approximately 100 a month, and the specialized nature of the medical decision-making in these cases which requires specialized medical expertise. A decision on a petition for reconsideration still would be made by the Administrator if the Federal Air Surgeon referred the decision on the initial petition for exemption to the Administrator in accordance with § 11.53.

A petition for reconsideration would have to be based on either a material mistake in fact or law or the presence of an additional fact not presented to the FAA in the initial petition.

D. Airworthiness Directives and Airspace Assignment and Use

Except for the amendments to §§ 11.61 and 11.81, the revisions of Part 11 made by these amendments do not relate to the issuance of Airworthiness Directives and rules concerning airspace assignment and use provided for in Subparts D and E of Part 11. Those subparts already contain delegations sufficient to provide for appropriate decentralization of rule making.

E. Various Operating Certificates, Operations Specifications and Airport Operations Manuals

Parts 121, 127, 133, 137, and 139 of Subchapter G of the Federal Aviation Regulations (14 CFR Parts 121, 127, 133, 137, and 139) are revised to indicate that the Administrator delegates to the head of the Office or Service concerned the authority to reconsider refusals of applications by certificate holders for amendments to various operating certificates, operations specifications, and airport operations manuals, and to reconsider amendments initiated by the FAA to operations specifications and airport operations manuals. Certain editorial changes are also contained in these amendments which make the sections affected consistent with the delegated authority.

F. Exemptions from Part 139

Section 139.19 is revised to delegate to the appropriate Regional Director the authority to grant or deny exemptions from the requirements of Part 139 with the exception of those petitions filed on behalf of military airports. The Assistant Administrator for Airports Programs is authorized to grant or deny the petitions for exemptions from the requirements of Part 139 filed on behalf of military airports. These delegations are authorized because of the local nature of most Part 139 exemptions and the necessity for coordinating a national policy for those exemptions filed on behalf of military airports. Finally, the language in § 11.41 has been changed to more accurately reflect the fact that exemptions are requested "from the requirements of" Part 139 and not "filed under" that Part.

III. EFFECTIVE DATE AND REQUEST FOR COMMENTS

Since these amendments are procedural in nature and implement existing statutory authority, notice and opportunity for public comment is not required. In addition, since these amendments are procedural and do not impose an additional burden, good cause exists for making them effective less than 30 days after publication. However, the FAA contemplates a review of the procedures established by these amendments after they have been in operation for at least twelve months. Interested persons are invited to

submit such comments as they may desire with respect to these amendments. Communications should identify the regulatory docket number and be submitted in duplicate to the Federal Aviation Administration, Office of the Chief Counsel, Attention: Rules Docket, AGC–24, 800 Independence Avenue, S.W., Washington, D.C. 20591. All comments received on or before March 9, 1979, will be considered during the review, and will be available both before and after that date in the Rules Docket for examination by interested persons.

IV. ADOPTION OF THE AMENDMENTS

Accordingly, Parts 11, 121, 127, 133, 137, and 139 of the Federal Aviation Regulations (14 CFR Parts 11, 121, 127, 133, 137, and 139) are amended, effective November 9, 1978.

(Secs. 313 and 601 of the Federal Aviation Act of 1958, as amended (49 U.S.C. 1354 and 1421); Sec. 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).)

The Federal Aviation Administration has determined that this document is not significant in accordance with the criteria required by Executive Order 12044, and set forth in the proposed "Department of Transportation Regulatory Policies and Procedures" published in the FEDERAL REGISTER June 1, 1978 (43 FR 23925). In addition, these amendments are procedural in nature and the Federal Aviation Administration has determined that the expected impact of these amendments is so minimal that they do not require an evaluation.

Amendment 127-37

Operations Review Program: Amendment No. 10

Airworthiness, Equipment, and Operating Rules

Adopted: October 17, 1979 **Effective: December 24, 1979**

(Published in 44 FR 61323, October 25, 1979)

SUMMARY: The purpose of these amendments is to update and improve certain requirements applicable to airworthiness, aircraft equipment, and operations. These amendments are part of the Operations Review Program and are based on a compilation of proposals prepared for the Operations Review Conference.

FOR FURTHER INFORMATION CONTACT:

Mr. Norman C. Miller, Safety Regulations Staff, Regulatory Review Branch, AVS-22, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, D.C. 20591, telephone 202-755-8715.

SUPPLEMENTARY INFORMATION

History

These amendments are the tenth in a series of amendments to be issued as part of the Operations Review Program. The following amendments of the series have previously been issued as part of the Operations Review Program:

Amdt. No.	*Title*	*Federal Register (FR) Citation*
1	Clarifying and Editorial Changes	(41 FR 47227; October 28, 1976)
2	Rotorcraft External-Load Operations	(42 FR 24196; May 12, 1977, amended by 42 FR 32531; June 27, 1977)
2A	Special Federal Aviation Regulation No. 36, Development of Major Repair Data	(43 FR 3084; January 23, 1978)
3	Airspace, Air Traffic and General Operating Rules	(44 FR 15654; March 15, 1979)
4	Miscellaneous Amendments	(43 FR 22636; May 25, 1978)
5	Certification and Operations: Domestic, Flag, and Supplemental Air Carriers and Commercial Operators of Large Aircraft	(43 FR 22643; May 25, 1978) amended by 43 FR 28403; June 29, 1978)
6	General Operating and Flight Rules and Related Airworthiness Standards and Crewmember Training	(43 FR 46230; October 5, 1978)

These amendments are based on a Notice of Proposed Rule Making (Notice 78-12) published in the FEDERAL REGISTER on August 24, 1978 (43 FR 37958). All interested persons have been given an opportunity to participate in the making of these amendments and due consideration has been given to all matters presented. A number of substantive changes and changes of an editorial and clarifying nature have been made to the proposed rules based upon relevant comments received and upon further review by the FAA. Except for minor editorial and clarifying changes and the substantive changes discussed

below these amendments and reasons for their adoption are the same as those contained in Notice 78-12.

Discussion of Comments

The following discussions are keyed to the like-numbered proposals contained in Notice 78-12.

Proposal 10-1. Several commenters objected to proposed § 25.772(a) stating that: (1) the possibility of door jamming is remote due to aircraft design; (2) cockpit crash axes offer an equivalent method; (3) maintenance and cockpit security would be adversely affected; and (4) a conflict exists between this proposal and §§ 25.772 and 25.809(b).

Some airplanes are designed to preclude floor deformation and subsequent door jamming; however, this proposal provides for and door jamming condition which could occur regardless of aircraft design. The use of a crash axe does not provide the same degree of access to the passenger compartment from the cockpit. Under certain conditions, the crash axe may not provide access until a considerable period of time has elased. Cockpit security would not be compromised since the requirement applies to new designs and allows sufficient design flexibility.

There is no conflict between this proposal and §§ 25.772 and 25.809(b) as stated by the commenter. Current § 25.772 requires that crewmembers have access to emergency exits without using cockpit doors, while this proposal provides for access to the cabin area if the cockpit door becomes jammed. Section 25.809(b) concerns the deformation of emergency exits and not cockpit doors.

One commenter objected to the use of the word "means" since the word implies a special device and suggested wording of a more general nature. The word "means" is not restrictive and its use in the regulation provides the necessary flexibility. One commenter believed the proposed requirement would not be appropriate for cargo or cargo/passenger configurations. With respect to a cargo only configuration, there are no passengers to assist, and it is unnecessary for the crew to have access to the passenger compartment. With respect to the passenger/cargo configuration, the FAA has determined that the means for access to the passenger compartment must be available and proposed § 25.772 is revised by providing this access.

Proposal 10-2. One commenter objected to proposed § 25.809(f)(1)(iii) stating that redesigning all slides to be equally effective with the aircraft in various positions would be difficult and recommended that the proposal be withheld until a different design concept is developed. Present provisions in § 25.809(h) require that slides be self-supporting after collapse of one or more legs of the landing gear. After further review, it appears desirable to retain these provisions and add to them, as provided in the Notice, the provision that the slide provide safe evacuation of the occupants to the ground. It is not anticipated that this provision would require a different design concept than currently employed.

Another commenter recommended revisions to the proposal that would provide exception from the requirement if the slide is fitted on an exit that is not suitable for use after a minor crash landing. Exit suitability is not solely predicated upon minor crash landings and therefore does not represent a design condition which could be satisfied under this comment. Accordingly, proposed § 25.809(f)(1)(iii) is adopted as noted.

Proposal 10-3. The Society of Automotive Engineers, Inc., objected to proposed § 25.812 stating that the problem in the two cases cited in the National Transportation Safety Board report (NTSB-AAS-74-3), referred to in the Notice, was due to crew training and not the failure of the lighting system. In both cases, poor crew coordination and not the failure of the lighting system resulted in improper activation of the emergency lighting during evacuation. They also stated that in some aircraft which utilize fuselage-mounted floodlights for escape device illumination, valuable illumination of the area surrounding the escape device permits safe movement of evacuees away from the crash site. These floodlights also assist rescue teams in rapidly locating the portion of the wreckage containing survivors in times of darkness. Modification to reconnect these floodlights to an

escape-device-lighting-system instead of the cabin emergency lighting system would create a less reliable system, considering the additional switches (or erection sensing devices) and wiring harness which would be necessary to connect the escape device to the floodlights on the fuselage. The SAE Committee considered the proposed rules concerning emergency lighting of exterior escape devices and the time compliance limitations to be necessary, economically unjustified and not necessarily in the best interest of safety. After review of these comments and in conjunction with studies conducted by the agency regarding the current lighting requirements, the FAA has determined that safety would not be improved as a result of this proposal and accordingly proposed § 25.812 is withdrawn.

Proposal 10–4. Six commenters objected to proposed § 21.310(h)(1)(iii) stating the cost of retrofitting all airline aircraft would be prohibitive and unwarranted. For example, three major airlines estimated that the cost of such a retrofit would be approximately $971,000, $608,399, and $870,000 respectively per fleet, and believe the proposal should be withdrawn. The FAA has analyzed these figures and determined they accurately reflect the retrofit cost burden that would be imposed on these airlines. In light of this determination and the fact that proposed § 25.812 (Proposal 10-3) has been withdrawn and in accordance with Executive Order 12044, and the Department of Transportation Regulatory Policies and Procedures which are intended to reduce the unnecessary burden on the public, the FAA concludes that this proposal would impose financial burdens on the public not commensurate with an increase in safety. Accordingly, proposed § 121.310(h)(1)(iii) is withdrawn.

Proposal 10–5. Several commenters objected to proposed § 121.313(f) contending that the proposal should be withdrawn because it is economically unjustified, and limits the designer's options in its applicability to existing airplanes, with possible compromise in cockpit security. They believe that to design, test, fabricate, install, and certificate such a type of egress to meet the intent of this proposal would have a cost impact of more than $100,000 per aircraft. The FAA acknowledges that there is merit to these contentions since retrofit of existing aircraft would be difficult and expensive. Accordingly, proposed § 121.313(f) is withdrawn.

Proposal 10–6. No unfavorable comments were received on the proposed revision to § 127.103(b). However, this proposal will require the replacement of many existing altimeters. Additionally, the FAA has determined that a one-year period should be allowed for manufacture, transportation, and installation of this equipment. Accordingly, this proposal will not become effective until one year after the effective date of these amendments.

Proposal 10–7. One commenter stated that the proposed requirement for a passenger's name and home address has no effect on flight safety and increases paperwork, time, and cost. Another commenter objected because the proposal would create an economical and operational burden. The commenter stated that it is difficult to obtain the additional information from passengers during flights having short time periods between connecting flights, or on international flights where passengers do not speak English. The commenter also stated that fixed-wing air carriers are not required to obtain this information. This statement is partially correct. Current Part 121 requires supplemental air carriers and commercial operators to include passenger names, but not addresses, on the load manifest. The FAA proposed in Notice No. 78–7 (43 FR 20448; May 11, 1978), to extend this requirement to domestic and flag air carriers.

In view of the comments received and after further review, proposed § 127.305 is revised by deleting "home addresses" and by inserting the word "persons" in place of "passengers".

Proposal 10–8. No unfavorable comments were received on the proposed revision to § 127.307(a). Accordingly, the proposal is adopted without substantive change.

Proposal 10–9. The majority of the commenters objected to the proposal to limit the duration of the Part 137 operator certificate to twenty-four months stating that the proposal is unnecessary, serves no useful purpose, and would not enhance safety. They stated that this proposal would: (1) impose an unnecessary burden on the legitimate operator; (2) re-

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quire additional paperwork; (3) possibly cause administrative problems during renewal certification; (4) not improve the availability of the transient type operators to the FAA; and (5) create a financial hardship to the agricultural aircraft operator if a delay in the renewal process causes that operator's certificate to expire during the busy season.

As stated in the Notice, the FAA has difficulty in adequately monitoring the activities of these certificate holders to assure compliance with and understanding of applicable rules. However, as stated by one commenter, this regulation would probably not improve the availability of transient-type operators since many would change their place of business after renewal. For this reason, and in accordance with Executive Order 12044 and the Department of Transportation Regulatory Policies and Procedures which are intended to reduce the unnecessary burden on the public, the FAA concludes that this proposal would impose administrative burdens on the FAA and the public not commensurate with an increase in safety. Accordingly, proposed § 137.15 and related revisions to §§ 137.19 and 137.21 are withdrawn.

Proposal 10–10. See Proposal 10–9 for a discussion of comments related to the proposed amendment to § 137.19 and for the withdrawal of that proposal.

Proposal 10–11. See Proposal 10–9 for a discussion of comments related to the proposed revision to § 137.21 and for the withdrawal of that proposal.

Proposal 10–12. Two commenters stated the proposed shoulder harness requirement was already covered in § 91.7(b). The FAA does not agree. Current § 91.7(b) provides only for the fastening of shoulder harnesses during takeoff and landings and not during the entire flight operation. Many of the commenters concurred with the use of seat belts and shoulder harnesses but objected to a mandatory requirement because it would curtail the pilots discretion in using them.

Other commenters contend that the use of shoulder harnesses could restrict the pilot's movement in performing required duties during certain operations.

In view of these comments and after further review the FAA agrees that under certain operations shoulder harnesses could interfere with pilot duties. Accordingly, proposed § 137.42 is revised to except the use of shoulder harnesses if the pilot is unable to perform required pilot duties with the shoulder harness fastened.

Adoption of the Amendments

Accordingly, Parts 25, 127, and 137 of the Federal Aviation Regulations (14 CFR 25, 127, and 137) are amended effective December 24, 1979.

(Secs. 313, 314, and 601 through 610, Federal Aviation Act of 1958 (49 U.S.C. 1354, 1355, and 1421 through 1430) and section 6(c), Department of Transportation Act (49 U.S.C. 1655(c)).)

Note.—The Federal Aviation Administration has determined that this document involves a regulation which is not significant under Executive Order 12044, as implemented by the Department of Transportation Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). A copy of the final evaluation prepared for this document is contained in the docket. A copy of it may be obtained by writing to the person and address listed under "For Further Information Contact".

Amendment 127-38
Technical Standard Order (TSO) Revision Program
Adopted: June 2, 1980 Effective: September 9, 1980

(Published in 45 FR 38342, June 9, 1980)

SUMMARY: The purpose of these amendments is to adopt a new public procedure to expedite the issuance of standards, known as Technical Standard Orders (TSO), for specified materials, parts, processes, and appliances used on civil aircraft. In accordance with Executive Order 12044, Improving Government Regulations, the new procedure will expedite TSO issuance and amendment, and will result in the substantial reduction of existing regulatory material. Consistent with the President's goal of reforming the regulatory process to eliminate unnecessary requirements, these amendments will enable the FAA to issue and amend TSO's in a timely manner. In addition, it is part of the FAA's continuing effort to simplify the Federal Aviation Regulations. The expeditious issuance of new TSO's and amendment of existing TSO's (presently published as Subpart B of Part 37) are necessary to stay current with the continuing growth and technological advances in aeronautics.

FOR FURTHER INFORMATION CONTACT:

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SUPPLEMENTARY INFORMATION:

BACKGROUND

Whenever a material, part, process, or appliance is to be used on an aircraft, it must be approved under the Federal Aviation Regulations (FAR) before it can be utilized. The approval can be obtained in one of the following ways: (1) under a Parts Manufacturer Approval issued under 14 CFR 21.303; (2) in conjunction with type certification procedures for a product, including approvals granted by a supplemental type certificate; (3) under a Technical Standard Order authorization or approval issued under 14 CFR Part 37; or (4) in any other manner approved by the Administrator.

One of the several methods of obtaining approval is by designing and testing the article (material, part, process, or appliance) in accordance with a TSO which contains minimum performance and quality control standards for specified articles. The standards for each TSO are those the Administrator finds necessary to ensure that the article concerned will operate satisfactorily. Since compliance with a TSO is only one method of obtaining an approval, the standards contained in the TSO are not mandatory but are only an optional way of obtaining approval for a particular article. For example, an applicant can obtain approval to deviate from a particular TSO if it shows that the design features provide an equivalent level of safety.

A TSO is not a standard of general or particular applicability designed to implement or prescribe law or policy. It does not fall within the definition of "rule" contained in the Administrative Procedure Act (5 U.S.C. 551). There is no requirement that a TSO be published as a notice of proposed rule making in the *Federal Register*.

Future TSO's will, through incorporation by reference, make maximum practical use of "voluntary standards" as defined by the Office of Management and Budget (OMB) Circular A-119, "Federal Participation in the Development and Use of Voluntary Standards," issued January 17, 1980 (45 FR 4326). By definition of OMB Circular A-119, "voluntary standards" are established generally by the private sector "voluntary standards bodies" and are available for use by any person or organization, private or government. The term includes what are commonly referred to as "industry standards" as well as "consensus standards" but does not include professional standards of personal

conduct, private standards of individual firms, or standards mandated by law. "Voluntary standards bodies" are nongovernmental bodies which are broad based, multimember, domestic, and multinational organizations including, for example, nonprofit organizations, industry associations, and professional technical societies which develop, establish, or coordinate voluntary standards.

The FAA has determined, for the reasons stated in Notice 79-15, published in the *Federal Register* on October 1, 1979 (44 FR 56370), that, in the interest of safety, it is appropriate to adopt new public procedures to facilitate the issuance of TSO's for specified articles used on civil aircraft. The safety aspect of this rule making is particularly important. The fact that TSO's have been part of the complex regulatory structure of the FAA has caused a substantial lag time between regulations and state of the technology. This procedural change should advance by months and even years the implementation of technological improvements in the U.S. aviation system.

Interested persons have been afforded an opportunity to participate in the making of these amendments, and due consideration has been given to all matters presented. Significant comments received in response to Notice 79-15 are discussed below. A number of substantive, editorial, and clarifying changes have been made to the proposed rules based on relevant comments and on further review within the FAA. Except for minor editorial and clarifying changes and the changes discussed below, these amendments and the reasons for their adoption are the same as those contained in Notice 79-15.

These amendments are consistent with the agency's responsibility to review the continuing need for regulations and the need to eliminate unnecessary regulations. By eliminating TSO's from the regulations, previously published as Subpart B of 14 CFR Part 37, and making them available through the multiple procedures described below, the FAA has improved the availability of the TSO's and made it easier for the public to locate the most up-to-date standard. In addition, by removing TSO's from the agency's regulatory process, the time available for other matters within the regulatory system will be increased. This will enable the agency to respond in a more timely manner to other issues submitted by the public. This improvement of the regulatory process, to be more responsive to the public, is consistent with Executive Order 12044, issued by President Carter on March 23, 1978.

DISCUSSION OF COMMENTS

Twenty-two individual sets of public comments were submitted in response to Notice 79-15. Several of the commenters were associations that presented the views of manufacturers, operators, and pilots. While the great majority of the commenters were in general agreement with the objective of the proposal, a number of them suggested changes, requested clarification or guidance, and offered specific criticisms. Other commenters proposed changes that are beyond the scope of this rule making.

DISCUSSION OF COMMENTS TO THE NEW PUBLIC PROCEDURE

In general, the commenters concerned themselves with the following questions: How would TSO authorizations be obtained? Would foreign countries accept them? How would a request for approval to deviate from any performance standard be handled? How would an interested party request a revision to a TSO? How would a current TSO be affected when a revision to the TSO is made? How would the public comment on a draft TSO? How would the FAA revise the sections of the Federal Aviation Regulations which reference a TSO by TSO number? One commenter expressed concern that adopting the proposal would abolish existing TSO's.

Based on comments received, the FAA has determined that the proposed new public procedure may not have been fully understood as it was explained in Notice 79-15. The purpose of the new public procedure is to expedite the issuance of TSO's for specified articles used on civil aircraft by deleting unnecessary rulemaking steps and by deleting unnecessary material from the regulations. This effort is consistent with Executive Order 12044. There is no change in the requirements for the issuance of TSO authorizations which are relocated from Subpart A of Part 37 to new Subpart O of Part 21. There is no change in the procedure to issue TSO authorizations, to process requests for approval to

deviate from any performance standard, or to request a revision to a TSO. Existing holders of TSO authorizations will continue to retain their current status when new or amended TSO's are issued, unless otherwise specified in the TSO. Manufacturers may request approval to deviate from any TSO using the same procedures as before, now described in new § 21.609.

The new public procedure does not affect the right of the public to comment on a proposed TSO. The public will continue to be invited to participate in the development of documents prepared and issued by industry organizations which the FAA will use by reference in a TSO. The FAA will use the rulemaking process to revise the sections of the Federal Aviation Regulations which reference a TSO by TSO number when there is a need to change the referenced TSO number. The FAA will make available to any interested person an index of each current TSO and each TSO the FAA anticipates will be issued within the succeeding 12 months. The FAA will also invite comments from interested persons on each proposed TSO using a notice in the *Federal Register*.

PUBLIC PROCEDURE

The following is the public procedure, in detail, the FAA will use to develop and issue final TSO's for specified articles used on civil aircraft:

- The FAA will continue to develop draft TSO's and will continue to use, by reference in the TSO, documents prepared and issued by organizations such as the Radio Technical Commission for Aeronautics (RTCA) and the Society of Automotive Engineers (SAE). Notices of RTCA meetings and invitations will continue to be published in the *Federal Register*. This will allow public participation at the early stages of document development.
- Any interested person may request the Administrator to revise or issue a new TSO by submitting a description of the revision sought or a description of the new article for which a TSO is requested.
- The FAA will use several methods to ensure that the public is afforded early opportunities to take part in the TSO decisionmaking process. A draft TSO will be circulated for public comment through the use of mailing lists. Any individual or organization can request to be placed on the TSO mailing list. All those on the list will receive drafts of each TSO. In addition, Advisory Circular 20–110, Index of Aviation Technical Standard Orders, will list those TSO's the FAA anticipates will be issued within the succeeding 12 months. Advisory Circular 20–110 will also list each current TSO and provide information on how to obtain copies of those desired. Finally, the FAA will publish periodically a notice in the *Federal Register* of each proposed TSO and provide notice of how to obtain a copy.
- Any individual or organization wishing to obtain copies of Advisory Circular 20–110, specific draft TSO's, or all such TSO's proposed by the FAA may be placed on a mailing list by submitting a request addressed to the Federal Aviation Administration, Office of Airworthiness, Aircraft Engineering Division, Systems Branch (AWS–130), 800 Independence Avenue, S.W., Washington, D.C. 20591, or by telephoning (202) 426–8395. Interested persons will receive copies of the Advisory Circular and copies of those draft TSO's requested. Any person wishing to submit comments on a proposed TSO will be given 90 days from its issuance date to submit comments.
- All comments received on or before the closing date for comments will be considered by the Administrator before issuing a final TSO.
- All comments submitted will be available, both before and after the closing date for comments, for examination by interested persons in Room 335, FAA Headquarters Building (FOB–10A), 800 Independence Avenue, S.W., Washington, D.C. 20591, between 8:30 a.m. and 5:00 p.m.
- Copies of the final TSO will be mailed to all persons on the mailing list. As in the past, documents prepared and issued by an organization that are incorporated by reference in the TSO will continue to be available to any interested person only from that organization. Final TSO's will not be published in the *Federal Register*.

- Copies of all draft and final TSO's will also be available at FAA Headquarters in the Office if Airworthiness, Aircraft Engineering Division, Systems Branch (AWS-130), and at all regional Flight Standards Engineering and Manufacturing offices.

In summary, the new procedure has numerous opportunities for the public to participate in the development of each TSO. These are: (1) participation in the development of documents prepared and issued by industry organizations, which the FAA may use by reference in a TSO; (2) mailing lists to circulate a draft TSO to the public for comment; (3) an advisory circular to list for the public each TSO the FAA anticipates will be issued within the succeeding 12 months; (4) notice in the *Federal Register* announcing the availability of each draft TSO and invitation for comment; and (5) at least 90 days to submit comments.

DISCUSSION OF GENERAL COMMENTS

One commenter recommended tightening the TSO requirements, citing three airplane incidents (the loss of a piece of tail, the loss of a wing flap, and the failure of a rear bulkhead). This amendment does not address the requirements of any individual TSO. Furthermore, TSO authorizations are not issued for the airframe parts that the commenter cited. FAA approval for these airframe parts is accomplished under the type design approval for the specific airplane.

One commenter cited TSO references in §§ 91.24(a), 91.52, and 121.360 and questioned if the FAA plans to revise these sections to delete the referenced TSO. The FAA is not revising the referenced TSO in these sections. Since Part 37 is being revoked by this amendment, references to TSO's using sections of Part 37 (§ 37.XXX) are revised to reference each TSO by the TSO number.

One commenter stated that there may be problems relating to the enforcement of the provisions of Advisory Circular 20-110 under proposed §§ 21.603(a), 21.607(a), 21.609, and 21.611. It is unclear to what this commenter is referring since the advisory circular merely lists each current TSO and each TSO the FAA anticipates will be issued within the succeeding 12 months.

DISCUSSION OF COMMENTS TO § 11.49(b)

Present § 11.49(b)(2) delegates authority to the Director, Flight Standards Service, to issue, amend, and repeal TSO's under Part 37. The notice proposed deletion of this delegation since Part 37 is being revoked. No unfavorable comments were received on the proposal. Accordingly, the proposal is adopted without change. However, it should be noted that the current FAA official responsible for TSO's is the Director of Airworthiness.

DISCUSSION OF COMMENTS TO § 21.3

Two commenters pointed out that § 21.3 contained most of the requirements of proposed § 21.617 and suggested deleting requirements in proposed § 21.617 that are duplicated in § 21.3. The FAA agrees and comments to proposed § 21.617 are discussed under § 21.3. Section 21.617 adopted by this amendment relates to a different subject than that of proposed § 21.617 which is discussed under § 21.617.

One commenter suggested revising proposed § 21.617(a) and (b) to require mechanical reliability reporting of TSO articles (currently required for Parts 121, 127, and 135 operators) for Part 91 operators or owners. The commenters cited greater user awareness of such problems for justification. Because the FAA is currently reviewing the entire mechanical reliability reporting program and the issue will be addressed at a later date, the suggestion was not adopted.

Another commenter asked if imported articles would be exempt from the reporting requirements of proposed § 21.617. Section 21.3(d)(2) does exempt foreign manufacturers from the reporting requirements of § 21.3(a) because there are existing means by which the FAA obtains the necessary information from the appropriate airworthiness authorities in the country of manufacture. As a result of the information provided by the

foreign authorities, it is not necessary to apply the requirements of § 21.3(a) to foreign manufacturers.

Another commenter suggested removing the phrase "After January 3, 1971" from proposed § 21.617(a) and (b). Based on these comments and upon further consideration, the FAA has amended § 21.3(a), (b), (d), and (e)(3)(ii) to make them applicable to holders of a TSO authorization, relocated proposed § 21.617(f) to new § 21.3(f), deleted the phrase "After January 3, 1971," from § 21.3(a) and (b), and deleted proposed § 21.617.

DISCUSSION OF COMMENTS TO SUBPART O OF PART 21

No unfavorable comments were received on the proposal to amend § 21.305(b) or on proposed §§ 21.609, 21.611, 21.613, 21.615, 21.619, and 21.621. Accordingly, these proposals are adopted without substantive change.

One commenter suggested deleting § 21.305(d) and amending § 43.7 to specify that any alteration or major repair approvals granted under Part 43 be limited to the specific aircraft (by type and serial number) upon which work is performed. The commenter stated that the provisions of § 21.305(d) in conjunction with discretionary functions of § 43.7 would "administratively lead to arbitrary and capricious application of subjective standards." No proposal was made in Notice 79-15 to amend §§ 21.305(d) and 43.7 as suggested by the commenter. Furthermore, since the FAA does not have sufficient information at the present time to justify such amendments to §§ 21.305(d) and 43.7, the suggestion is not adopted.

One commenter suggested placing the TSO procedural requirements under Subpart K instead of proposed Subpart O and questioned the need for the proposed new Subpart O. Relocation of the procedural requirements of Subpart A of Part 37 in new Subpart O, as proposed, would retain the same paragraph format subdivisions which are easy to read and use. This would make the regulations easier to use for all members of the public. Therefore, these requirements are relocated in Subpart O.

One commenter suggested that TSO authorizations be transferable. The FAA does not agree. TSO authorizations are not transferable like type certificates because authorizations are issued based on the person's quality control system and ability to duplicate the article under the TSO system.

§ 21.601

No unfavorable comments were received on proposed § 21.601. However, the FAA is adopting an amendment to § 21.601 by adding paragraph 21.601(c) which states that the Administrator does not issue a TSO authorization if the manufacturing facilities for the product are located outside of the United States, unless the Administrator finds that the location places no undue burden on the FAA in administering applicable airworthiness requirements. This additional requirement is necessary to ensure that proper surveillance can be maintained over the manufacturer's facilities. The need to impose this restriction is based upon the type of surveillance necessary over a manufacturer having a TSO authorization. It is identical to the restriction placed upon manufacturing facilities to which type certificates are issued in accordance with § 21.43 and to which production certificates are issued in accordance with § 21.137 and reflects current practice. A new § 21.617 is adopted to address current practices for approving foreign-manufactured articles designed to TSO performance standards. The procedures of new § 21.617 provide an equivalent to the domestic TSO authorization.

§ 21.603

One commenter objected to proposed § 21.603(b) which continues to allow the holder of an FAA letter of acceptance of a statement of conformance, issued for an article before July 1, 1962, to continue to manufacture that article without obtaining a TSO authorization. The commenter stated that this establishes different levels of safety for the same product because it allows a product to continue to be manufactured under obsolete standards when that product could not meet current standards. Holders of such letters must comply with the requirements of §§ 21.607 through 21.615, 21.619, and 21.621. In general,

when an application for TSO authorization is made, the applicable standards for the article are those in effect on the date of application. The FAA did not propose to revise § 21.603(b) to withdraw letters of acceptance issued before July 1, 1962, or any TSO authorization issued after July 1, 1962, and to require all manufacturers to demonstrate compliance with the current TSO performance standards. No unfavorable comments were received on the proposal to relocate the substance of § 37.3 to new § 21.603. Accordingly, the proposal is adopted without substantive change.

§ 21.605

One commenter recommended revising proposed § 21.605 (a)(2) to require one copy of the technical data required in the applicable TSO issued by the Administrator unless additional copies are requested by the Administrator. The FAA agrees this would reduce the number of copies of the technical data the applicant would need to submit. Another commenter suggested revising the last sentence of proposed § 21.605(a)(3) to add the phrase "or numbers (or combinations thereof)" between the words "letters" and "will." The commenter stated this would allow the use of suffix numerals as well as letters to designate minor changes to TSO articles. The FAA agrees. After further review, the FAA has determined that the use of part numbers in proposed §§ 21.605(a)(3) and 21.611(a) to identify minor design changes would simplify and expedite approval of such changes. This is consistent with Executive Order 12044 in that it lessens the regulatory burden on the public. Accordingly, § 21.605 is adopted with the noted changes.

§ 21.607

One commenter suggested deleting proposed § 21.607(d)(3) because the required weight information is not necessary as a part of the nameplate and it is provided elsewhere. The FAA agrees. Section 21.607(d)(3) is deleted and § 21.607(d) is renumbered. The same commenter recommended amending proposed § 21.607 to list the required data and information currently listed in the performance standards of each TSO to further simplify the TSO system. The FAA has determined that since the data and information listed in each TSO are not common to all TSO's, the recommendation, if adopted, would impose unnecessary requirements on some TSO authorization holders. Accordingly, proposed § 21.607 is adopted without substantive change.

Issue of Letters of TSO Design Approval: Import Appliances

New § 21.617

In order to implement the requirements contained in §§ 21.601(b)(2), 21.603(d) and 21.609(b), the FAA is adopting procedural requirements which reflect current practice for the issuance of letters of TSO design approval for import appliances (see discussion of § 21.601). New § 21.617, which is totally different in subject from proposed § 21.617 (see § 21.3), prescribes the procedural requirements and, as adopted, §§ 21.601(b)(3), 21.603(a), and 21.609(b) are revised to address foreign manufacturers. These procedural requirements reflect the current practice. Adopting this procedure causes no burden on any person and it has the benefit of formalizing the current practice. The FAA finds that notice and public procedure are unnecessary.

NOTE: This rule contains provisions for the issuance of a TSO authorization and a letter of TSO design approval. To differentiate, a TSO authorization is limited to manufacturers of articles (materials, parts, processes, or appliances) located in the United States. These manufacturers must comply with the requirement to submit quality control system data in addition to certifying that their design complies with the pertinent TSO. Conversely, a letter of TSO design approval is processed under the provisions of airworthiness bilateral agreements and is limited to appliances as defined in pertinent airworthiness bilateral agreements. Such approvals do not require submitting quality control data. The quality control integrity of these appliances is attested to by the Certificate of Airworthiness for Export issued by the civil airworthiness authority of the country of manufacture under the provisions of § 21.502.

NOTE: Any article approved under an FAA TSO authorization (domestic) or under a letter of TSO design approval (foreign) only attests to the conformity of the design and quality of the particular article against the TSO performance and quality control standards. It does not convey an installation approval. Accordingly, installation approval must be obtained in a manner acceptable to the Administrator for each particular product on which the article is to be installed. This is not a change in existing practice.

DISCUSSION OF COMMENTS TO PART 37

One commenter suggested revoking only Subpart B of Part 37. The FAA has determined that there is benefit in having all of the certification procedures for products and parts in Part 21 of the Federal Aviation Regulations. Accordingly, the proposal to revoke Part 37 is adopted without change.

NOTE: There is no change in reporting and/or recordkeeping requirements which are relocated from Subpart A of Part 37 to new Subpart O of Part 21.

ADOPTION OF THE AMENDMENTS

Accordingly, Parts 11, 21, 25, 29, 37, 91, 121, 127, and 135 of the Federal Aviation Regulations (14 CFR Parts 11, 21, 25, 29, 37, 91, 121, 127, and 135) are amended, effective September 9, 1980.

(Sections 303(d), 313(a), 601, 603, and 605, Federal Aviation Act of 1958, as amended (49 U.S.C. 1344, 1354(a), 1421, 1423, 1424, and 1425; Section 6(c), Department of Transportation Act (49 U.S.C. 1655(c)).)

NOTE: The FAA has determined that this document involves regulations which are not considered to be significant under the procedures and criteria prescribed by Executive Order 12044 and as implemented by the Department of Transportation Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). A copy of the final evaluation prepared for this action is contained in the regulatory docket. A copy of it may be obtained by contacting the person identified under the caption "FOR FURTHER INFORMATION CONTACT."

Amendment 127-39
Operations Review Program: Amendment No. 8
Adopted: June 16, 1980 **Effective: August 31, 1980**

(Published in 45 FR 41586, June 19, 1980)

SUMMARY: These amendments update and improve certain requirements for the certification and operation of domestic, flag, and supplemental air carriers and commercial operators of large aircraft, for the certification and operation of scheduled air carriers with helicopters, and for the airworthiness standards for transport category airplanes. These amendments are part of the Operations Review Program and are based on a compilation of proposals discussed at the Operations Review Conference.

FOR FURTHER INFORMATION CONTACT:

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SUPPLEMENTARY INFORMATION:

History

This amendment is issued as part of the Operations Review Program. The following amendments have previously been issued as part of this program:

	Title and Federal Register (FR) Citation
Amendment No. 1:	Clarifying and Editorial Changes (41 FR 47227; October 28, 1976).
Amendment No. 2:	Rotorcraft External-Load Operations (42 FR 24196; May 12, 1977 and 42 FR 32531; June 27, 1977).
Amendment No. 2A:	Special Federal Aviation Regulation No. 36, Development of Major Repair Data (43 FR 3084; January 23, 1978).
Amendment No. 3:	Airspace, Air Traffic, and General Operating Rules (44 FR 15654; March 15, 1979).
Amendment No. 4:	Miscellaneous Amendments (43 FR 22636; May 25, 1978).
Amendment No. 5:	Certification and Operations: Domestic, Flag, and Supplemental Air Carriers and Commercial Operators of Large Aircraft (43 FR 22643; May 25, 1978, 43 FR 28403; June 29, 1978, and 44 FR 25201; April 30, 1979).
Amendment No. 6:	General Operating and Flight Rules and Related Airworthiness Standards and Crewmember Training (43 FR 46230; October 5, 1978).
Amendment No. 10:	Airworthiness, Equipment, and Operating Rules (44 FR 61323; October 25, 1979).

These amendments are based on three Notices of Proposed Rule Making: Notice 78-7 (43 FR 20448; May 11, 1978), Notice 78-7A (43 FR 33158; August 10, 1978), and Notice 75-31 (40 FR 29410; July 11, 1975). Interested persons have been given an opportunity to participate in the making of these amendments and due consideration has been given to all matters presented. A number of substantive changes and changes of an editorial and clarifying nature have been made to the proposed rules based upon relevant comments received and upon further review by the FAA. Except for minor editorial and clarifying changes and the substantive changes discussed below, these amendments and the reasons for their adoption are the same as those contained in Notices 78-7, 78-7A, and 75-31. Several comments were received which discussed matters not proposed in the Notice.

These comments are beyond the scope of the Notice and cannot be considered without further notice and public participation.

Discussion of Comments

Airworthiness Review Program

The proposal to add a new § 25.819 (Proposal 8-40) was deferred from Airworthiness Review Program Amendment No. 8, Cabin Safety and Flight Attendant Amendments, and is included in this amendment with other cabin safety rules.

New § 25.819 establishes a level of safety for occupants of lower deck service compartments equivalent to that now provided for occupants of the main deck. To do this, § 25.819 requires several things: (1) two emergency evacuation routes (one at each end of each lower deck service compartment or two having sufficient separation within the compartment); (2) automatic emergency illumination for each lower deck service compartment; (3) two-way voice communication between the flight deck and each lower deck service compartment; and (4) an emergency alarm system and a public address system. Specific safety requirements are adopted for the powered lift system and for other safety related features. The rule provides design requirements that assume occupancy of the lower deck service compartment during taxi and flight. Under § 25.819, occupancy of the compartment is not allowed during takeoff or landing.

Several wide-body airplanes have lower deck service compartments, located below the main cabin, which are used during flight for food service. One operator uses the compartment during taxi, but not during takeoff or landing. This amendment provides design criteria that would allow all operators to use the compartment during taxi if certain strict safety design standards are met during the certification process.

A commenter suggests that the heading of § 25.819 include the term "galley" because that word (with the words "service compartment") is used in the text. The term "service compartment" includes a galley, but for clarity, the parenthetical phrase "(including galleys)" is added to the heading of § 25.819 and the word "galley" is deleted in the text of § 25.819.

A commenter suggests that § 25.819 should apply to airplanes having a service compartment that is located above (as well as below) the main deck. Section 25.819 addresses the unique aspects of lower deck service compartments. Existing rules are adequate for the safe design of other service compartments.

Several commenters object to allowing (in the lead-in sentence of § 25.819) occupancy of the lower deck service compartments "during taxi." They contend that flight attendant occupants of these compartments during taxi are subject to injury because they cannot see outside the compartment and they may not be able to evacuate the compartment if an accident occurs. The provisions of § 25.819 are specifically designed to warn occupants of any emergency and to ensure their safe evacuation to the main deck. As part of the warning system, the rule requires a two-way voice communication system, an emergency alarm system, and a public address system. Main deck flight attendants cannot always see outside and the FAA is unaware of data which shows a correlation between the ability to see outside and the potential for flight attendant injury. To assure that occupants of the lower deck service compartment can get out in an emergency, § 25.819(a) is changed and requires two emergency evacuation routes (one at each end of each lower deck service compartment or two having sufficient separation within the compartment) which can be used under normal and emergency lighting conditions.

Several commenters contend that flight attendants should be stationed on the main deck during taxi operation so they are available to perform safety functions if an accident occurs. New § 121.391 (see the discussion of proposal 8-4) provides that required flight attendants remain seated at their assigned station during taxi except to perform safety related functions. Thus, flight attendants in the lower deck during taxi would not affect the demonstrated emergency evacuation of the airplane.

A commenter recommends that § 25.819(a) include a requirement that the evacuation escape route be designed to minimize the possibility of blockage which might result from

"persons standing on top of or against escape routes." The possible blockage of evacuation escape routes (hatches and other cabin openings) by persons standing on top of or against them is examined during airplane type certification. The comment has merit and § 25.819(a) is revised to include this recommendation as a design requirement.

A commenter suggests that § 25.819(b) be revised by substituting the words "a two-way voice communication system to and from" for the words "two-way voice communication between," to clarify the need for communication between occupants of the various compartments covered. The language in § 25.819(b) is clear in this respect.

Two commenters suggest clarification of the term "emergency alarm system" in § 25.819(c). They observe that this term could be interpreted to call for a visible signal, an audible signal, or even an intercommunication system. The comment has merit and § 25.819(c) is revised to require an aural emergency alarm system. A commenter suggests that the emergency alarm system in § 25.819(c) should be "suitable for inflight audibility" at all required locations. This comment has merit and § 25.819(c) is revised to require that the aural emergency alarm system be audible during normal and emergency conditions.

A commenter suggests that there might be some overlap between § 25.819(b) and Proposal 7-45 in Airworthiness Review Notice No. 7 (40 FR 24810; June 10, 1975). Section 25.819(b) deals with emergency evacuation of lower deck service compartments to the main passenger deck. Proposal 7-45 deals with emergency evacuation of passenger compartments. Thus, there is no overlap.

A commenter points out that on wide-body airplanes there are frequently more flight attendant seats than the required number of flight attendants. The commenter suggests the word "required" should be inserted before the phrase "main deck flight attendant stations" in § 25.819(c). In response to this comment, the amendment is changed to read "require floor level exit" instead of "main deck flight attendant stations". This change will provide an adequate aural emergency alarm system to alert occupants of each lower deck service compartment, by requiring that an aural emergency alarm system be located at each required floor level emergency exit. Since new § 121.391 provides that required flight attendants remain seated at their assigned stations during taxi, locating the alarm systems at required floor level emergency exits will insure that they are readily available to required flight attendants to alert occupants of lower deck service compartments if an emergency occurs.

A commenter suggests that the emergency alarm system described in § 25.819(c) should require that crew occupants of each compartment be capable of alerting crew occupants of each other compartment that an emergency condition exists. This requirement was proposed as Proposal 7-53 in Airworthiness Review Notice No. 7 (40 FR 24812; June 10, 1975). In Airworthiness Review Amendment No. 7 (43 FR 50578; October 30, 1978), that proposal was withdrawn because there was not enough information to specify intercommunication equipment requirements appropriate for all transport category airplanes.

Another commenter asks whether the emergency alarm system described in § 25.819(c) should be connected to the electrical system emergency bus bar. The emergency bus bar is reserved for those electrical loads essential for safe flight and landing if a power interruption occurs. The emergency alarm system is not essential for safe flight and landing under emergency conditions. The alarm system should not be connected to the emergency bus bar.

A commenter recommends that § 25.819(d) be revised to require a means readily detectable by occupants of upper, main, and lower deck service compartments to indicate when seat belts should be fastened. This is unnecessary. Present § 25.791 requires passenger information signs in all passenger compartments. Section 25.819(d) requires the same signs in the lower service compartment.

A commenter suggests that § 25.819(e) require that a public address system be installed with speakers suitable for inflight audibility. Section 121.318 requires a public address system for airplanes engaged in passenger operations under Part 121. Under

§ 121.318(b)(4), this public address system must be audible at each flight attendant seat. Requiring the installation of the public address system as a condition for type certification under Part 25 is inappropriate since some of the certificated airplanes will not be operated in passenger operations under Part 121. Thus, Part 121 all-cargo operators and persons who do not operate under Part 121 would be required to bear the cost of an expensive installation that is not required for their operation.

A commenter points out that, since the lower deck service compartment would not be occupied during takeoff and landing, the seat prescribed in § 25.819(f) need not be limited to forward or aft facing. The FAA issued an Airworthiness Directive on February 23, 1976 (41 FR 8766) which stated that injuries have been experienced in sideward facing seats during relatively mild incidents of turbulence. Since the seat may be occupied during flight, safety of the occupant requires that the seat be forward or aft facing and meet the requirements of § 25.785(c). The commenter also states that the seat should only be designed to flight loads, and to loads that might occur during taxi, rather than to the emergency landing loads of § 25.561. Since § 25.785(a) applies only to seats that may be occupied during takeoff and landing, the seats prescribed by § 25.819(f) need not comply with the emergency landing conditions specified in § 25.561, but must be able to withstand maximum flight loads when occupied.

Another commenter suggests that § 25.819(f) be revised to require that both supplemental and portable oxygen systems be immediately available to each occupant of the lower deck service compartment. Section 25.1447(c)(4) requires that portable oxygen equipment must be immediately available for each cabin attendant. Section 25.1447 also contains oxygen system requirements that apply to all occupants, wherever located on the airplane. These rules are sufficient.

One commenter objects to the phrase "if the lift is occupied" in § 25.819(g)(1) stating that the language obviously implies occupancy by a person. The commenter asks how the lift knows whether it is occupied by a person or a cart. To design a system to distinguish between a person and a cart would unnecessarily complicate the design of the lift control system. The commenter further states that the rule would also prohibit the operation of an empty lift. The commenter's points are valid and the phrase "if the lift is occupied" is deleted from § 25.819(g)(1).

In response to another commenter, the control switch must prevent activation of the lift if either the hatch in § 25.819(g)(4) or the lift door in § 25.819(g)(1) or both are open. Section 25.819 is revised to make this clear.

A commenter objects to § 25.819(g)(2) as unclear. The commenter contends that the requirement to provide an alternate method of operating the lift (after failure of its primary power source) would unnecessarily complicate the system. Section 25.819(g)(3) requires an alternate means for evacuating persons from an inoperative lift, with the lift in any position. Accordingly, proposed § 25.819(g)(2) is withdrawn, and proposed §§ 25.819(g)(3) and (g)(4) are redesignated §§ 25.819(g)(2) and (g)(3), respectively.

A commenter suggests that the words "evacuating persons from the lift" in § 25.819(g)(3) be replaced with the words "evacuation which is of the size and shape to safely remove persons from the lift." The suggested language would not add to or improve the requirement.

Concurrently with this amendment, the FAA is issuing Operations Review Notice No. 8A for reasons explained in the preamble of that Notice. The Notice proposes that all flight attendants remain seated during taxi, except to perform duties related to the safety of the airplane and its occupants. The Notice also requests commenters to submit specific data on flight attendant injuries during taxi. If the proposal in the Notice is adopted as proposed, operations requiring occupancy of the lower lobe during taxi as allowed under new § 25.891 may be severely limited.

Public Address System

Amendment 25-46 (43 FR 50578; October 30, 1978) amended § 25.1411 to require at least one public address system microphone intended for flight attendant use to be posi-

tioned at each floor level exit and to be readily accessible to a flight attendant seated in any seat adjacent to that exit. Amendment No. 121-149 (43 FR 50578; October 30, 1978) amended § 121.318 to require compliance, after December 1, 1980, with the new public address system microphone requirements.

Since publication of Amendments 25-46 and 121-149, it has come to the attention of the FAA that these rules inadvertently failed to refer to only required floor level exits. Sections 25.1411(a)(2) and 121.318(b)(2) are revised to provide that each public address system microphone intended for flight attendant use must be positioned adjacent to a flight attendant seat that is located near each required floor level emergency exit in the passenger compartment and be readily accessible to the seated flight attendant.

Amendment 121-149 allows a compliance date of 2 years, until December 1, 1980, for installation of the public address system. Approximately 18 months have passed since the issuance of the amendment, during which the operators have not fully complied with Amendment 121-149 because of the ambiguity in the rule. Recognizing that the operators have already initiated compliance with the rule, the compliance date for § 121.318(b)(2) is extended 1 year to December 1, 1981, to allow the intended 2-year compliance period.

With these amendments, §§ 25.1411(a)(2) and 121.313(b)(2) continue to require: (1) installation of a public address system microphone at a seat located near each floor level exit that is designated for use by a required flight attendant; (2) that only one public address system microphone need be installed for arrangements in which more than one required flight attendant is seated near the same required floor level exit; and (3) that the public address system microphone need not be usable by the required flight attendant while standing next to a required floor level exit.

Since these amendments are clarifying in nature and do not impose a burden on the public, notice and public procedure are unnecessary and these changes are adopted as noted.

Operations Review Program

The following discussions are keyed to like-numbered proposals contained in Notice 78-7.

Proposal 8-1. No unfavorable comments were received on § 121.177(b) that requires corrections to be made for the effective runway gradient when determining takeoff limitations. Section 121.177(b) is adopted without substantive change.

Proposal 8-2. This proposed revision of § 121.311(b) would require passengers to have their seat belts fastened during flight time and allow them to leave their seats only for physiological needs or when authorized by a crewmember. The majority of the many commenters strongly oppose what they consider unnecessary regulatory restrictions on passengers. Many believe that a passenger should retain the right to decide whether or not to fasten the seat belt after being properly informed of potential risks involved. Several commenters support the requirement to keep the seat belt fastened while seated but object to requiring a passenger to obtain a crewmember's permission to leave the seat. Many commenters point out that they customarily keep their seat belt fastened while seated. Others state that adoption of this regulation would dilute the present procedure for mandatory fastening of seat belts (such as on landing, takeoff, or when flying through turbulent air) and would result in confusion and possible compromise of safety.

In light of these comments, the FAA has determined that current §§ 121.571(a)(2) and 121.317(b) provide sufficient advisory information to the passengers. Executive Order 12044 and the Department of Transportation Regulatory Policies and Procedures are intended to reduce unnecessary burdens on the public. Accordingly, the FAA concludes that this rule would impose unnecessary burdens on passengers, industry, and the FAA not commensurate with an increase in safety. Accordingly, the proposal to amend § 121.311(b) is withdrawn. A proposal to amend § 127.109 in a similar manner (Proposal 8-23) is withdrawn for the same reasons.

Proposal 8–3. Several commenters favor § 121.317(b) which requires that a fasten seat belt sign be affixed to each seat back as a reminder to passengers to fasten their seat belts when they return to their seats.

One commenter objects and states that if § 121.317(b) means that passengers should remain in their seats with seat belts fastened at all times, then leaving the present seat belt sign lighted at all times would accomplish that end. The sign required by § 121.317(b) reminds passengers to fasten their seat belts when they return to their seats. The present seat belt sign is used during landings, takeoffs, turbulent air, or emergency conditions and passengers must remain in their seats and fasten their seat belts when that sign is used.

Another commenter objects to the cost of installing the signs, to the lack of specifications for installing them, and to the passenger confusion that would result in trying to comply with two fasten seat belt signs (the lighted sign and the seat back sign). The signs will enhance safety by reducing injuries from inflight turbulence. This offsets any minimal increase in cost. Specifications were not proposed to allow operators maximum flexibility in designing and installing the signs. Passenger confusion would be reduced because the briefing required by § 121.571(a) will include an explanation to passengers of the purpose of both signs. The proposal is adopted without substantive change.

None of the comments received addressed the time needed to comply with § 121.317(b). Under this requirement, the certificate holder must install a sign for each passenger seat. There are more than 3,250 airplanes operated under Part 121 with an average seating configuration in excess of 100 seats. The FAA estimates that it will take several months to design and obtain the over 325,000 signs needed to comply with the rule. Based on the number of seats and airplanes involved, the FAA estimates that installation of the signs will take several more months. The required installations can be accomplished during routine scheduled maintenance. Based on these facts, the FAA concludes that 1 year is needed to comply with § 121.317(b) and that section takes effect 1 year after the effective date of these amendments.

The amendment to § 127.115 (Proposal 8–24) is adopted for the same reasons.

Proposal 8–4. Section 121.391(d) requires flight attendants, required by Part 121, to be seated with seat belts and shoulder harnesses fastened during taxi except to perform safety related duties. The majority of the commenters favor adoption of § 121.391(d). Their reasons include personal safety of flight attendants, flight attendant availability at duty locations during emergencies requiring evacuation, and passenger reaction to observing flight attendants moving freely about the cabin. Many flight attendants cite injuries occurring when they are thrown about the cabin during sudden turns or stops while taxiing. One commenter objects to allowing flight attendants to perform duties related to safety since that may be harmful to the flight attendants' personal safety. This objector fails to recognize that the duties enumerated are essential to passenger safety. Flight attendants must brief passengers to ensure their safe evacuation as well as perform other safety-related functions.

Three commenters object to § 121.391(d). Based on limited research, one commenter could find no instance of passenger fatalities or serious injuries during taxi. A search of FAA accident/incident records and NTSB files for a 7-year period shows 18 instances of airplane evacuation during taxi which resulted in 71 passenger and 4 flight attendant injuries. As an example, a flight attendant was thrown down the stairs and hospitalized for at least 48 hours by a sudden stop of a Boeing 747 airplane while taxiing for takeoff in Honolulu, Hawaii, on February 2, 1980. One commenter states that flight attendants receive adequate notice to enable them to return to their required stations before an emergency evacuation. However, notice cannot always be provided and if the flight attendant is not at the station when an emergency occurs, precious seconds may be lost during an evacuation.

This commenter also says that the rule is vague as to what safety related duties are. Duties related to the safety of the airplane and its occupants include the checking of seat belts and seat backs, preflight briefings, directing an emergency evacuation, responding

to a cabin emergency, or aiding a passenger or crewmember who requires emergency assistance.

This commenter also points out that the rule makes it virtually impossible to offer the passengers any form of refreshment service while on the ground. Requiring flight attendants to be seated during taxi may result in a reduction of refreshment service. The safety benefits of having the required flight attendants at their assigned stations and ready to execute an emergency evacuation far outweigh the customer service benefits derived from early refreshment service. Also, refreshment service is not allowed during takeoff and landing because of its possible impact on safe evacuation if an emergency occurs. Another commenter states that a flight attendant moving through the aisle and returning passenger belongings during taxi-in helps ensure that passengers remain in their seats. Although this comment may have some merit, the overall safety of passengers and flight attendants is more important than the possible benefit to be received by allowing required flight attendants to return passenger belongings during taxi.

In printing the text of the proposed sentence to be added to § 121.391(d), the FEDERAL REGISTER inadvertently changed the wording proposed by the FAA and documented in public docket number 17897. As published in the FEDERAL REGISTER, the sentence began: "During taxi, required by this section, flight attendants must. . . ." As transmitted to the FEDERAL REGISTER, the sentence began: "During taxi, each flight attendant required by this section must. . . ." The language the FAA proposed would impose the rule on required flight attendants only. As adopted, the sentence reflects the original language that FAA proposed.

Section 121.391(d) as already noted is based upon FAA accident/incident records and NTSB files that include 18 emergency evacuations during taxi over a 7-year period which resulted in 71 passenger and 4 flight attendant injuries. When conducting the emergency evacuation demonstration required under § 121.291(a) for a particular airplane, a required number of flight attendants is established. Section 121.397 specifies that the required crewmembers, which includes flight attendants, be assigned functions to be performed in an emergency evacuation. If an evacuation is necessary because of an emergency during taxi it is important that the required flight attendants be seated at their assigned duty stations to assist in the evacuation. Should they be up and injured or unable to reach their assigned station by passengers blocking the aisle, the time required to evacuate the airplane could be increased, the evacuation process itself possibly impeded, and passengers and crewmembers subjected to a higher probability of injury. For this reason, § 121.391(d) applies to required flight attendants who must be seated at their duty station during taxi and be able to perform their safety related duties if necessary. Thus, § 121.391(d) is adopted with the typographical errors corrected.

Concurrently with this amendment, the FAA is issuing Operations Review Notice No. 8A for reasons explained in the preamble to that Notice. The Notice proposed to extend applicability of § 121.391(d) to all flight attendants by requiring that they remain seated during taxi, except to perform duties related to safety. The Notice also requests commenters to submit specific data on injuries to flight attendants.

Proposal 8–5. Several commenters object to the words "except for length" in § 121.434(e). They argue that cabin training devices should simulate actual cabin length so flight attendant trainees experience proper distance to emergency exits under simulated emergency conditions. Some commenters want to add the word "realistic" following "full-scale" to assure the certificate holder provides adequate training. Simulated cabin training realistically duplicates the actual cabin training and is equivalent to or better than the training that is received in an actual airplane. Before the FAA approves a training program, the certificate holder must show that the device realistically duplicates cabin duties and emergencies. Therefore, the suggested changes are not made.

One commenter wants to include training time accomplished in a parked aircraft to reduce flight attendant operating experience under § 121.434(e). A parked aircraft may be used as a training device if approved as part of the training program, but that is no substitute for experience gained in a line operation. Another commenter wants to reduce

flight attendant operating experience based upon the number of additional takeoffs and landings (as for flight crewmembers). Based on experience gained under § 121.434(e), the FAA has determined that the present requirement of 5 hours of operating experience in an airplane and the proposed revision to allow the substitution of 50 percent of the operating experience for training conducted in an approved training device, is the minimum requirement for flight attendants.

Proposed § 121.434(e) should have used the words "training device"rather than "simulator." Accordingly, § 121.434(e) is adopted with this change.

Proposal 8–6. Several commenters object to § 121.441(a) because pilots qualified and serving in more than one type of airplane would have to complete an unnecessary number of qualifying proficiency checks and simulator training courses. The intent of the proposal was to clarify that the proficiency check requirements of § 121.441 should not be fulfilled in an airplane other than the type in which the person is to serve. However, if adopted as proposed, § 121.441 would require a pilot in command qualified in more than one type airplane to take a proficiency check and a simulator course of training in each type of airplane during a 12-month period. The FAA did not intend to place these additional requirements on a pilot in command qualified in more than one type of airplane and the current rule adequately ensures safety of flight. The elimination of this unnecessary proposal is consistent with Executive Order 12044 and the Department of Transportation Regulatory Policies and Procedures which are intended to reduce unnecessary burdens on the public. The FAA concludes that § 121.441(a) would impose burdens not commensurate with the increase in safety and § 121.441(a) is withdrawn.

Proposal 8–7. No unfavorable comments were received on the proposal to revise § 121.443, except one objection to § 121.443(b). The commenter claims that the word "ensures" is unnecessary and is subject to misinterpretation. The commenter argues that airlines accept full responsibility by providing crew training and appropriate information for flight operations. Thus, there should be no requirement to ensure knowledge and the ability to use that knowledge. The certificate holder is responsible for the training program. The certificate holder also is responsible (through that training program) to ensure that the pilot in command has adequate knowledge of, and the ability to use, the information provided for the flight.

The commenter also suggests deleting "holding procedures" in § 121.443(b)(6) and "Notices to Airmen" in § 121.443(b)(8). Information on holding procedures and notices to airmen must be provided to ensure that the pilot in command has all available information necessary for the safety of each flight. Finally, the commenter suggests substituting "appropriate" for "all" in § 121.443(b)(6). The word "authorized" better describes the instrument approach procedures that must be provided under § 121.443(b)(6). The word "all" could require that information to be provided on procedures which are unnecessary. Section 121.433(b)(6) is revised by substituting "authorized" for the word "all."

Proposal 8–8. One commenter wants § 121.445(b)(2) changed to allow the use of "other" than pictorial means, but does not say what they are. Without a specific alternative, the FAA cannot evaluate this comment. This commenter also states that the ceiling requirements of § 121.445(c) are not specific enough and need clarification. The commenter suggests that the "altitude prescribed for the instrument approach" means the "initial approach altitude." The comment has merit and the words "initial approach altitude" are used in § 121.445(c).

The commenter also has difficulty with the "special area" qualification in § 121.445(d) which requires either a qualification flight or approved training every 12 calendar months. The commenter argues that a pilot who is qualified with the special type of cockpit navigation in one area also is qualified in any other area. This comment has merit and § 121.445(d) is revised to allow a pilot to meet the qualification requirement by using the special type of cockpit navigation over any route or area within the preceding 12 calendar months. In addition, the word "route" is added to "area" so that possible single routes requiring specialized navigation systems are included as well as specific areas (such as the Minimum Navigation Performance Systems over the Atlantic Ocean).

Proposal 8–9. No unfavorable comments were received on deleting § 121.447 on pilot and airport qualifications and the section is deleted.

Proposal 8–10. One commenter objects to § 121.563 because insignificant, non-safety, mechanical irregularities would be entered in the maintenance log book and then "cleared" at both maintenance and nonmaintenance stations, causing increased costs and unnecessary delays. Section 121.153 does not require maintenance log book entries to be cleared any differently than the existing rule does. This rule requires mechanical irregularities to be entered in the maintenance log at the next place of landing. The rule is particularly appropriate with the increasing complexity of aircraft systems and the minimum equipment lists.

The FAA proposed to delete the last sentence of § 121.563 because this requirement is covered in other sections of Part 121. Further study reveals that the requirement for a pilot in command to ascertain the status of the airplane before each flight is not covered elsewhere. Therefore, the last sentence is not deleted from § 121.563 as proposed.

Proposal 8–11. This change to § 121.571(a)(2) proposed to require an announcement after takeoff that all passengers must keep their seat belts fastened as required by Proposal 8–2. Since Proposal 8–2 is withdrawn, this proposal also is withdrawn.

Proposal 8–12. No unfavorable comments were received on § 121.574(a)(4) requiring the written statement of medical need by the doctor to be kept in the possession of the person using the oxygen equipment. It is adopted as proposed.

Several commenters object to changing § 121.574(b) because the current minimum distance of 10 feet between a person who is smoking and a person using oxygen is adequate. Another commenter suggests that the distance be reduced. After review of the comments and a reexamination of this proposal, the FAA concludes that the current rule should be retained. The proposal is confusing and would be difficult to enforce. The definition of a row is not uniform and the distances are not readily measurable. The proposal to amend § 121.574(b) is withdrawn.

Proposal 8–13. Proposed § 121.579 would have revised the rules for minimum altitudes for the use of autopilots in approaches. Comments received from the Airline Pilots Association and Civil Aviation Authority of England on proposed § 121.579(b) reflect inconsistencies between the existing rule and supporting documents (Advisory Circular 25.1329–1A and Agency Order 8110.8) which proposed § 121.579(b) does not resolve. The comments received consisted of 24 pages of technical evaluations of the present rule, proposed rule, and Advisory Circular 25.1329–1A. After a thorough review of the submitted material the FAA concludes that the commenters are correct and that a further review of the present operational and certification criteria is necessary to correct the problems and accordingly proposed § 121.579(b) is withdrawn.

Proposal 8–14. No unfavorable comments were received on § 121.583(a)(4)(iii) regarding the safe handling of hazardous materials and it is adopted without substantive change.

Proposal 8–15. Several commenters favor § 121.589. Many are flight attendants who deal directly with the problem associated with carry-on baggage on aircraft. They cite instances of being forced to stow baggage which cannot be properly stowed. This is because boarding agents allow passengers to board the aircraft carrying this baggage. These commenters also state that passengers who carry their baggage aboard often become irate and troublesome when a flight attendant attempts to take their baggage and stow it properly. The commenters argue that lack of adequate regulatory requirements puts the flight attendants in a position of opposing the passenger, the company, and the boarding agent when they try to deal with the baggage. Properly stowed baggage is important to safe emergency evacuation, and the burden of compliance more appropriately rests on the certificate holder.

One commenter suggests that certain articles of clothing in garment bags be allowed in open overhead racks. These bags cannot be allowed in open overhead racks because of the potential hazard from heavy or sharp items on or in the garment bags. Section

121.589(b) allows these articles to be stowed overhead if the overhead rack has approved restraining devices or doors.

One commenter objects to § 121.589(d) regarding sideward restraint of under seat baggage because it is unnecessary. The commenter argues standard airline operating procedures are effective. Current airline standard operating procedures are not effective. This is reflected in the comments of flight attendants who deal directly with carry-on baggage. Section 121.589(a) prevents baggage from coming aboard if it cannot be properly stowed. Sections 121.589(b) and (d) require that carry-on baggage be prevented from becoming dislodged from overhead racks and underseat stowage areas during hard or crash landings and inflicting injuries to passengers or hampering the emergency evacuation of the aircraft. Section 121.589(c) requires passengers to comply with crewmember instructions concerning stowage of carry-on baggage. Passengers who fail to comply with these instructions are subject to a civil penalty. This rule lessens the number of problems crewmembers face and enables them to concentrate on their safety-related duties.

The commenter also objects to the high cost impact on the certificate holders and submits estimated aisle seat installation cost data for 17 airlines which vary from $21.00 to $150.40 for each aisle seat. The two largest operators' estimates indicate a cost of $25.75 and $31.50 for each aisle seat. These estimates are more in line with the FAA estimate of $30.00 for each aisle seat. In view of these figures, the cost is not considered to be significant in comparison to the resulting safety benefits.

One commenter points out that § 121.589(d) requires a sideward restraint on each passenger seat. Sideward restraint now is provided on most non-aisle seats by the seat track attachments. Section 121.589 is changed to require sideward restraint only on each aisle seat.

Two commenters object to § 121.589(d) because an adequate period of time was not proposed to allow for the installation of sideward restraints. The Air Transport Association of America and Delta Airlines submitted data to support their contention that from 4 months to 7 years are needed to comply with the rule without special scheduling. Under § 121.589(d), the certificate holder must install sideward restraints on each aisle seat. For the 17 airlines on which data was submitted, over 71,000 seats are involved. Based on the data submitted, the FAA estimates that it will take up to 1 year to design, test and obtain the over 71,000 sideward restraints needed to comply with the rule. The commenter submitted no data to support the contention that it would need 7 years to comply and the FAA concludes that a 7-year compliance period is not realistic. The data does indicate a 2-to 3-year period is an appropriate time to complete these installations. Based on all of the comments received, the FAA concludes that a 3-year compliance period will allow time for installation of sideward restraints on aisle seats with little, if any, special scheduling. A shorter compliance time would require inordinate special scheduling and result in higher costs which are not commensurate with the incremental advance in safety that would result. Accordingly, § 121.589(d) takes effect 3 years after the effective date of these amendments.

Proposals 8–16 and 8–17. These changes reduce the 2-hour weather requirement for alternate airports to 1 hour. They also change the ceiling requirement of 1,000 feet above the MEA or MOCA to 1,500 feet above the MDA, if a circling approach is required and authorized, or 1,500 feet above the lowest published minimums or 2,000 feet above the airport elevation, whichever is higher.

Three commenters favor § 121.619. However, they object to any visibility increase beyond the present 3-mile requirement and state that the phrase "or 2 miles more than the lowest applicable visibility minimums, whichever is greater, for the instrument approach procedure to be used at the destination airport" would, at times, require a visibility greater than 3 miles. They consider this too restrictive. Section 121.619 satisfies this objection.

One commenter wants to reduce the visibility minimum to 2 miles. Three miles visibility is considered the minimum acceptable requirement since the aircraft could be operated under visual flight rules in accordance with § 91.105 if 3 miles or greater visibility existed.

One commenter objects to reducing the forecast time period from 2 hours to 1 hour before and after the estimated time of arrival because present weather forecasting capabilities are not precise enough to provide an acceptable prognosis within those time limits. The proposed time limit is sufficient since the pilot in command, under §§ 121.601 and 121.603, is provided with updated weather data en route.

One commenter objects to the deletion of the word "or" following § 121.621(a)(1). This would remove the air carrier's option to operate under the provision of either § 121.621(a)(1) or § 121.621(a)(2) as presently provided in the rule. There is no need to meet both requirements and § 121.621(a) retains the word "or" to preserve the option. The same commenter also notes that present § 121.621(a)(2) incorrectly refers to § 121.645(b). The correct reference is § 121.645(c).

A substantively identical proposal was made in Operations Review Notice No. 6 (42 FR 44205; September 1, 1977) for § 91.23, fuel requirements for flight in IFR conditions. In Operations Review Amendment No. 6 (43 FR 46230; October 5, 1978), § 91.23 was amended to reduce the weather requirements to 1 hour before and after the estimated time of arrival and required a ceiling of at least 2,000 feet above the airport elevation and a visibility of at least 3 miles. Commenters to Notice No. 6 argued that the proposed rule was simpler than the current rule but was still cumbersome. They suggested it would be much simpler if criteria were established which would require the pilot to determine only that a certain ceiling and visibility would exist. The FAA, in adopting Amendment No. 6, agreed with the comments and is aware of no adverse effects of the new rule.

At the time changes to §§ 91.23, 121.619, and 121.621 were proposed in Operations Review Notice Nos. 6 and 8, the FAA intended that, eventually, all three sections would be substantively identical. A review of the airport approach minimums shows that this intent can be safely realized for domestic operations under §§ 91.23 and 121.619. The FAA has not determined that the requirement for a 1,500 foot ceiling above the lowest circling MDA or published minimum approach or a visibility of 2 miles more than the lowest applicable visibility minimum (proposed in Operations Review Notice No. 8) can be safely deleted for flag air carrier operations under § 121.621. Accordingly, § 121.619(a) is adopted with the changes noted and § 121.621(a) is adopted as proposed.

Proposal 8–18. For comments relating to the deletion of § 121.691 see Proposal 8–19. Section 121.691 is deleted and the section marked "reserved."

Proposal 8–19. Several commenters object to § 121.693(e) on the grounds that scheduled air carriers would suffer unnecessary administrative and economic burdens with no significant increase in safety. They claim that air travel is the only mode of transportation which requires names of passengers and indicate that the requirement may be an invasion of the privacy of the traveling public. They were particularly against requiring the addresses of passengers. The names of passengers are necessary for identification purposes in case of an accident or other emergency situations. The nature of aircraft accidents is such that other means of identification may not be feasible. A requirement to obtain the addresses of passengers may be an unnecessary burden on certificate holders and is unnecessary for identification purposes. Therefore, § 121.693(e) is revised by deleting the words "and home addresses". One commenter feels that passenger identification would have to be confirmed at the boarding gate to satisfy the requirements of § 121.693(e). Section 121.693(e) only requires use of the name given by each passenger. Accordingly, § 121.693 is adopted with the revisions discussed.

No unfavorable comments were received on combining the load manifest requirements for domestic and flag carriers of § 121.691 with the requirements of § 121.693 for supplemental air carriers and commercial operators. Thus, § 121.691 is deleted and reserved.

Proposal 8–20. No unfavorable comments were received on the amendment to Appendix E. However, after reconsideration, the FAA withdraws the proposed amendments to Items III(1)(1) and (2). This change proposed to allow the normal ILS approach with a simulated powerplant failure, the missed approach from an ILS approach, and the

missed approach that includes a powerplant failure to be accomplished in a visual simulator during initial training. The FAA is not convinced that all visual simulators currently in use have sufficient capability to fully train initial training candidates in these maneuvers. The FAA proposed in Notice 79-18 (44 FR 65550; November 13, 1979) simulator requirements to accomplish these maneuvers for initial training in a simulator. Therefore, these items of the proposal are withdrawn. The remainder of the changes are adopted as proposed.

Proposal 8-21. No unfavorable comments were received on the proposal to amend Appendix F. However, after further examination, the FAA has concluded that this proposal has several inconsistencies. In most cases, the FAA does not directly observe a pilot during training. The primary means used by the FAA to evaluate a pilot's knowledge and skill is the practical examination conducted under Appendix A of Part 61 or Appendix F of Part 121. The oral examination is an integral part of this evaluation and must be retained to ensure that a pilot has an understanding of the airplane and its systems and that an operator's training program is conveying the required knowledge to the pilot. Therefore, the proposal to delete the equipment examination in Item I(a) under certain conditions is withdrawn.

The proposal to delete the "B" symbol in the "Inflight" column and add it to the "Visual Simulator" column for Item III (c)(2) allows any pilot to perform the ILS approach with a simulated powerplant failure in a visual simulator. Section 121.441 allows the entire proficiency check (other than the initial second in command proficiency check) to be conducted in an approved visual simulator if the pilot performs two landings in the airplane during a line check. This means that all pilots (except for a flight engineer upgrading to a second in command and flying the airplane for the first time) are already allowed to accomplish the ILS approach with a simulated powerplant failure in a visual simulator. Since an upgrading flight engineer may not have piloted an airplane for a number of years, all of the inflight requirements in Appendix F should be retained to assure that the person is capable of performing this maneuver in the airplane.

Deleting the requirement that at least one missed approach must be performed in flight would set a precedent of eliminating the necessity for a pilot flying the actual airplane to completely plan and execute an instrument approach which includes the missed approach procedure.

Accordingly, the proposal to amend Appendix F is withdrawn.

Proposal 8-22. The change to Appendix G of Part 121 would add additional requirements to make it compatible with all long-range navigation systems. One commenter correctly states that present Appendix G, and § 121.355(a) which refers to Appendix G, apply only to doppler radar and inertial navigation systems.

Another commenter states that the change is too specific and limits design. The intent is not to restrict the development of new and improved long-range navigation systems.

Two commenters object to the addition of a requirement in paragraph 5(d) for recurrent training and a line check each 12 calendar months. The intent is to ensure proficiency in the use of the long-range navigation systems by the line check. If performance during this check is unsatisfactory, then recurrent training will be required. The proposal does not make this clear.

Both the proposal and comments received have merit. Although the proposal for Appendix G refers to navigation equipment other than doppler radar and inertial navigation, those systems are not specifically allowed under § 121.355(a). The FAA, in a future Operations Review Notice will propose changes to § 121.355(a) to specifically allow other systems as well as changes to Appendix G. This approach will produce more meaningful criteria.

Accordingly, the proposal to amend Appendix G of Part 121 is withdrawn.

Proposal 8-23. For comments related to the proposal to revise § 127.109(b), see Proposal 8-2. Accordingly, the proposal to revise § 127.109(b) is withdrawn.

Proposal 8-24. For comments relative to new § 127.115(b), see Proposal 8-3. Accordingly, the proposal to add a new § 127.115(b) is adopted without substantive change.

Proposal 8-25. No unfavorable comments were received on new § 127.226. However, after further review and consideration, the FAA has determined that passengers should not be required to fasten their seat belts at all times when they are seated. For related comments see Proposal 8-2. An announcement must be made to alert passengers that they "should" keep their seat belts fastened while seated, even when the "Fasten Seat Belt" sign if off. This is similar to the requirement in § 121.571.

Accordingly, § 127.226 is adopted with the change discussed.

Adoption of The Amendments

Accordingly, Parts 25, 121, and 127 of the Federal Aviation Regulations (14 CFR Parts 25, 121, and 127) are amended, effective August 31, 1980.

(Secs. 313, 314, 601 through 610, Federal Aviation Act of 1958 (49 U.S.C. 1354, 1355, 1421 through 1430); Sec. 6(c), Department of Transportation Act (49 U.S.C. 1655(c)).)

NOTE: The FAA has determined that this document involves a regulation which is not significant under Executive Order 12044, as implemented by Department of Transportation Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). A copy of the final evaluation prepared for this document is contained in the docket. A copy of it may be obtained by writing to the individual and address listed in the "For Further Information Contact" paragraph.

Amendment 127-40

Carriage of Candidates in Federal Elections

Adopted: June 23, 1980 **Effective: July 1, 1980**

(Published in 45 FR 43160, June 26, 1980)

SUMMARY: Special Federal Aviation Regulation (SFAR) 37 allows a person who is not in the air transportation business to receive limited payment for carriage of candidates in Federal elections without the carriage being considered a commercial operation, in accordance with regulations issued by the Federal Election Commission (FEC). This amendment codifies the requirements of SFAR 37 into the Federal Aviation Regulations (FAR). Conforming amendments are made to those provisions of the FAR which concern domestic, flag, and supplemental air carriers, commercial operators, scheduled air carriers with helicopters, and air taxi operators to make it clear that those parts do not apply to the operations covered by the new regulation.

FOR FURTHER INFORMATION CONTACT:

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SUPPLEMENTARY INFORMATION:

BACKGROUND

SFAR 37, which became effective September 26, 1978, was issued to resolve a conflict that was created when compliance with the regulations of the FEC resulted in a violation of the FAR. Under the rules of the FEC, a candidate in a Federal election must pay for carriage in an aircraft. More specifically, the FEC rules state, in part, that when a candidate, candidate's agent, or person traveling on behalf of a candidate uses an airplane which is owned or leased by a corporation or labor organization, he or she must reimburse the aircraft operator. In the case of travel to a city served by regularly scheduled commercial service, reimbursement must be the first-class air fare. In the case of travel to a city not served by regularly scheduled commercial service, reimbursement must be the usual charter rate.

Under the FAR, an aircraft operated without compensation is operated pursuant to 14 CFR Part 91, General Operating and Flight Rules. If an operator receives compensation, he or she must have an appropriate operating certificate pursuant to Part 121, 127, or 135 of the FAR. Before FEC regulations affecting the carriage of candidates were promulgated in 1977, operators were not restricted in the carriage of candidates without compensation; however, after the FEC regulations were issued, candidates were required to make payment to operators who carried them. Instances have occurred in which individuals or corporations operating aircraft have desired to carry a candidate without charge, but the candidate would be required to compensate the operator to comply with the rules of the FEC. Receipt of payment by an aircraft operator without an appropriate operating certificate would result in a violation of the FAR. Therefore, a situation was created in which compliance with the regulations of the FEC results in a violation of the requirements of the FAR. SFAR 37 was issued to harmonize the rules of the FAA and the FEC consistent with the President's regulatory reform philosophy (Executive Order 12044).

SFAR 37 invited the public to submit their views to the FAA for inclusion in the rules docket. Sixty-three comments have been received, the vast majority of which were submitted by air taxi and commercial operators. A letter from the FEC commends the FAA for making it easier for pilots, aircraft owners, and Federal candidates to comply with FEC regulations and those of the FAA by eliminating a point of conflict between the regulations of the two agencies. One commenter states that it would be in the public interest to incorporate the SFAR into the regulations to relieve the restriction and make FAA rules consistent with FEC rules.

The commenters' principal objection to SFAR 37 is that the rule encourages unsafe operations since it does not impose the certification requirements applicable to commercial operators.

As stated previously, an operation for compensation generally requires an appropriate operating certificate. However, the carriage of candidates by an aircraft operator not in the air transportation business for a limited form of payment is not considered a commercial operation. The mere fact that payment is received by the operator because it is compelled by the FEC's rules does not mean that the operator should be regulated like an air carrier or commercial operator. Payment is sharply limited by the FEC, the recovery generally not even meeting expenses incurred for the flight. In addition, the operators affected by these amendments are a limited group, and their carriage of candidates is conducted on an infrequent basis for only short periods of time every few years. These operators are no different from anyone else flying under the general operating rules of the FAR because they are not engaged in the business of carrying passengers.

An adequate level of safety will be maintained because all operations conducted under these amendments will be governed by the provisions of FAR Part 91. This Part governs the majority of aircraft operations conducted by U.S.-registered aircraft, and all operations conducted within the United States. Part 91 adequately provides for the safety of aircraft operations by requiring that aircraft be maintained and operated in a safe manner. It provides, for example, that no person may operate an aircraft unless it has had an annual inspection and has been maintained in an airworthy condition between inspections. In the case of large and turbine-powered (turbojet and turboprop) multiengine airplanes, the owner and operator must follow one of five detailed programs for the inspection of that airplane. From an operationsl standpoint, Part 91 prescribes standards in the following areas, among others: use of seat belts; fuel requirements for flight both under VFR and in IFR conditions; transponder and altitude reporting equipment and use; and supplemental oxygen requirements. In addition, the provisions of FAR Part 61, Certification: Pilots and Flight Instructors, require each crewmember to maintain currency and by fully qualified for the type of operation to be conducted. Part 61 contains, among other things, proficiency check requirements and recent flight experience requirements for pilots in command, as well as qualification requirements for persons serving as second in command. Accordingly, the FAA does not agree that these amendments, which allow the carriage of candidates for payment to be conducted under Part 91, will encourage unsafe operations.

Another group of commenters states that SFAR 37 promotes unfair competition since air taxi and commercial operators, unlike their counterparts who operate under the SFAR, must bear a considerable expense in complying with FAA-imposed regulations under Part 135. The FAA does not agree with this view. The carriage of candidates in Federal elections is infrequent and the operator who is involved in such carriage does not intend to engage in the business of being an air carrier or commercial operator. These operators are accepting payment only because FEC rules require them to do so. They are not flying for profit but instead are receiving a limited form of compensation which in virtually all cases would not cover the total direct and indirect expenses of the flight. These operators are not holding themselves out to the public for business, but are rather involved in private arrangements with candidates with whom they are oftentimes well acquainted on a personal level. It must be emphasized that an operator carrying political candidates in accordance with this regulation would be required to comply with Part 121,

127, or 135 of the FAR in more than the minimal compensation required by the FEC regulations is received.

Another objection to the SFAR is that it was implemented without proper notice and solicitation of comment. However, adequate legal justification was set forth in the SFAR for proceeding without notice. A finding of good cause was made for dispensing with notice and public procedure, and this finding was in compliance with the requirements of the Administrative Procedure Act. The FAA, in accordance with Department of Transportation policy, solicited post-issuance comments which have been considered.

Several commenters point out that operators under SFAR 37 would suffer serious repercussions in the event of an accident because of insurance problems, as most policies for the operation of business and pleasure aircraft do not cover flights for hire. Insurance coverage is a private matter which every Part 91 operator must consider, and with which the FAA does not generally concern itself. It should be noted, however, that operators who are affected by this amendment are usually knowledgeable corporations which have their aircraft insurance program reviewed by competent underwriters. Insurance coverage can be arranged to accommodate these infrequent operations in the same manner as it is arranged for operations under Subpart D of Part 91 where a limited form of compensation is allowed.

DESCRIPTION OF THE AMENDMENTS

Part 91 is amended to provide that an aircraft operator, other than one operating an aircraft under the rules of Part 121, 127, or 135, may receive payment for the carriage of a candidate in a Federal election, an agent of the candidate, or a person traveling on behalf of the candidate while operating under the rules of that Part. The operator's primary business may not be that of an air carrier or commercial operator, the carriage must be conducted under the rules of Part 91, and the payment for the carriage must be required by regulations of the FEC. Parts 121, 127, and 135 are amended to make it clear that they do not apply to the operations described in this new Part 91 regulation.

NEED FOR IMMEDIATE ADOPTION

Due to the imminent Federal election campaigns of 1980, I find that the reasons which justified the adoption of SFAR 37 still exist. Since these amendments continue the provisions of a currently operative SFAR and impose no additional burden on any person, I find that notice and public procedure are impracticable and contrary to the public interest and that good cause exists for making them effective in less than 30 days.

THE AMENDMENTS

Accordingly, the Federal Aviation Administration amends Parts 91, 121, 127, and 135 of the Federal Aviation Regulations effective July 1, 1980.

(Secs. 313(a), 601, and 604 of the Federal Aviation Act of 1958, as amended (49 U.S.C. 1354(a), 1421, and 1424); Sec. 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).)

NOTE—The FAA has determined that this document involves a regulation which is not significant under Executive Order 12044, as implemented by Department of Transportation Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). In addition, the FAA has determined that the expected impact of the regulation is so minimal that it does not require an evaluation.

Amendment 127-41
Operation of Foreign-Registered Aircraft
Adopted: October 13, 1980 Effective: October 16, 1980

(Published in 45 FR 68646, October 16, 1980)

SUMMARY: These amendments allow U.S. air carriers to operate foreign-registered aircraft, subject to certain conditions and limitations, in foreign air transportation and between points within the United States. They implement the "International Air Transportation Competition Act of 1979" (Pub.L. 96-192) which, among other things, amended section 1108(b) of the Federal Aviation Act of 1958 to allow U.S. air carriers to engage in otherwise authorized common carriage and carriage of mail with foreign-registered aircraft under lease or charter to them without crew. These amendments make available to U.S. air carriers, including air taxi and commuter air carriers, a new source for aircraft and for equipment financing and will assist those carriers in achieving increased operational efficiency.

FOR FURTHER INFORMATION CONTACT: Mr. Eli S. Newberger, Regulatory Projects Branch (AVS-24), Safety Regulations Staff, Associate Administrator for Aviation Standards, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, D.C. 20591; telephone: (202) 755-8716.

SUPPLEMENTARY INFORMATION:

History

This final rule is based on Notice of Proposed Rule Making No. 80-8, published in the *Federal Register* on May 1, 1980 (45 FR 29064). All interested persons have been given an opportunity to participate in the making of the rule and due consideration has been given to all matters presented.

Background

Notice 80-8 was issued to provide the basis for implementation of an important amendment to section 1108(b) of the Federal Aviation Act of 1958 (49 U.S.C. 1508(b)) (the FA Act) contained in the International Air Transportation Competition Act of 1979" (Pub. L. 96-192) which became effective February 15, 1980. That amendment to the third sentence of section 1108(b) permitted the Administrator to issue regulations "authorizing United States air carriers to engage in otherwise authorized common carriage and carriage of mail with foreign-registered aircraft under lease or charter to them without crew." Prior to the amendment, section 1108(b) of the FA Act prohibited foreign-registered aircraft from taking on, at any point within the United States, persons, property, or mail carried for compensation or hire and destined for another point within the United States. The statutory amendment is important because it provides the basis for availability to United States air carriers of a new source of aircraft which may be utilized under a wide variety of circumstances. This point will be discussed further under the heading "Benefits".

Notice 80-8 proposed changes to §§ 121.153, 127.71, and 135.25 of the Federal Aviation Regulations (FAR) to implement the statutory amendment. One aspect of the Notice was the deletion from §§ 121.153 and 135.25 of prohibitions on the use of any aircraft not registered as a civil aircraft of the United States. In addition to implementing section 1108(b) as it existed prior to February 15, 1980, those prohibitions also prohibited carriage by U.S. carriers in other than U.S.-registered aircraft between a point in the United States and a point outside the United States, and between points outside the United States. Although Part 127 did not contain an explicit prohibition on the use of foreign-registered aircraft, the effect of section 1108(b) of the FA Act prior to February 15, 1980, was to prohibit use of those aircraft in air commerce within the United States. The second aspect of the Notice was the addition to §§ 121.153, 127.71, and 135.25 of provisions permitting a Part 121, 127, or 135 certificate holder to operate in common

carriage, and for the carriage of mail, a civil aircraft which is leased or chartered to the certificate holder without crew and is registered in a country which is a party to the Convention on International Civil Aviation (Chicago Convention). Four basic requirements were proposed as conditions precedent to the operation of a foreign-registered aircraft as follows:

(1) The aircraft must carry an appropriate airworthiness certificate issued by the country of registration and must meet the registration and identification requirements of that country.

(2) The aircraft must comply with all the requirements of the Federal Aviation Regulations which would be applicable if the aircraft were U.S.-registered instead of foreign-registered.

(3) The certificate holder must file a copy of the lease or charter agreement with the FAA.

(4) The aircraft must be operated by airmen employed by the certificate holder.

Discussion of Comments

The FAA received 11 comments in response to Notice 80-8. These comments represent the views of individuals, labor organizations, foreign governments, airline organizations, and other government agencies. Six commenters highly favor the proposal, four submitted comments and recommendations, and one opposes the proposal.

The commenter opposing the proposal contends that the leasing of these aircraft erodes the U.S. work force by allowing the foreign lessor to maintain the aircraft. The FAA does not agree. The rule permits an air carrier to use a foreign-registered aircraft. The maintenance, preventive maintenance, and inspection requirements for the foreign-registered aircraft are the same as those required for a U.S.-registered aircraft. The U.S. air carrier must conduct the operation and maintenance of the foreign-registered aircraft in accordance with its currently approved FAA operations specifications. This commenter is also concerned that there will be a deterioration in the safety level. This concern is not justified. The foreign-registered aircraft will be of a design approved by the FAA, and will be manufactured, maintained, and operated under the same standards as a U.S.-registered aircraft. Finally, this commenter requested that the rule making be deferred and a public hearing be held. The FAA does not agree that this is necessary. These amendments require a level of safety which is equivalent to that required for U.S.-registered aircraft. The commenter has not made any showing justifying delay of these amendments or why a public hearing should be held.

Several commenters are concerned about the accomplishment of airworthiness directives, service bulletins, service letters, service difficulty reporting, maintenance schedules, maintenance procedures, mechanic certification, and the overall airworthiness of an aircraft that wa[s] maintained by a foreign operator. The FAA requires air carriers to show compliance wit[h] [t]he operating and airworthiness rules before issuing operations specifications authorizing the aircraft's operation. These amendments require the certificate holder to maintain the foreign-registered aircraft to standards equivalent to those for U.S.-registered aircraft. Therefore, there will not be any significant difference between the airworthiness of a foreign-registered aircraft and a U.S.-registered aircraft operated by a U.S. air carrier.

One commenter states it is unclear why it may be necessary for a pilot to obtain a foreign airman certificate. If imposed by the country of registry, this requirement would parallel the U.S. regulation that requires a foreign airman operating a U.S.-registered aircraft to hold a current U.S. pilot certificate when operating the U.S.-registered aircraft. This requirement conforms with the obligation imposed on the country of registry by the Chicago Convention.

One commenter states the FAA should make a predetermination that the minimum airworthiness requirements of the foreign country of registry meet the minimum U.S. airworthiness requirements. The FAA does not agree that this is necessary or advisable. It is the air carrier's responsibility to provide to the FAA the documentation and records

necessary to determine type certification conformity. The FAA will then make the necessary inspections and/or reviews needed to determine the aircraft's compliance status prior to authorizing the aircraft's use in U.S. air carrier operations. In some cases, the operator may be required to make alterations or obtain exemptions from state of registry requirements in order to operate the aircraft in U.S. air carrier operations.

One commenter proposes a change to allow the certificate holder to contract for airmen as well as the aircraft as long as they are under the exclusive direction and control of the lessee certificate holder. The FAA does not agree. This suggested change would allow wet lease agreements which are contrary to the provision in the statute which limits this rule making to a lease or charter agreement without crew.

Several foreign airworthiness authorities commented on the various rules, conditions, and limitations contained in their respective regulations concerning the operation and airworthiness of aircraft registered and maintained in their respective states. Their concern is whether the country of registry or the FAA is responsible for surveillance of the aircraft. Since the aircraft is treated as a U.S.-registered aircraft in all respects, while being operated by a U.S. air carrier, the FAA will conduct such surveillance as necessary to ensure compliance with the FAR no matter where the aircraft is operated. The certificate holder is responsible for making arrangements with the country of registry to satisfy that country's requirements, including any special documentation required by that country to be carried on the aircraft. It may be necessary for the lessee or lessor to obtain exemptions or concessions from the foreign airworthiness authority who has jurisdiction over the registration of the aircraft. In any case, the FAA will require documentation or conduct physical inspections to ensure compliance with all applicable requirements in the FAR.

One commenter suggests the FAR should provide for the FAA to accept alternate procedures to those laid down in the FAR if the FAA finds that the procedures of the country of registry provide an equivalent level of safety. It is inappropriate to include such provisions in a general rule making of this nature. Findings of equivalency, if appropriate, are best left for determination in specific cases. The FAA encourages parties to consult with the FAA with a view toward an exemption if there is an appropriate set of circumstances that seem to lend themselves to an exemption.

Another commenter cites a number of hypothetical difficulties that could arise as a result of these leases. The FAA contemplates that any difficulties encountered are best addressed by consultation between the governments involved in specific cases and are inappropriate for resolution in a general rule. The FAA notes that just such a procedure was followed in the case of the Concorde interchange between Braniff and British Airways/Air France.

One commenter questions why the aircraft must meet U.S. type certificate requirements. One of the requirements in the present regulations for air carriers is that an aircraft must have a current airworthiness certificate issued under Chapter 1 of 14 CFR. In order to have a current U.S. airworthiness certificate, the aircraft must comply with U.S. type certificate requirements. This standard is maintained in this rule to ensure that the aircraft is of a design approved by the FAA.

One commenter is concerned as to who can perform maintenance when the aircraft is operated by the certificate holder for a lease or charter operation. The FAA requires that maintenance must be performed by another U.S. certificate holder and those authorized by Parts 43 and 145 of the FAR.

Overall, the FAA recognizes that it has maintained a purposefully high safety standard; however, at the same time the FAA recognizes that we are dealing with cases of first impression. The FAA welcomes the opportunity to deal with individual proposals on a case-by-case basis with a view toward seeing that the Congressional intent is fully carried out.

Benefits

The new law and these amendments enhance the ability of the industry to increase aircraft utilization and to obtain aircraft financing from other than U.S. sources. It should open up a previously virtually untapped source of aircraft equipment for the broad spectrum of air carriers ranging from the very large trunk carrier to the smallest commuter or air taxi air carrier. For example, aircraft purchased by foreign owners from U.S. manufacturers can be leased to U.S. carriers for relatively long periods of time. As another example, a U.S. air carrier could lease a foreign-registered aircraft during its peak season and return the aircraft for the foreign air carrier's peak season. As still another example, the statute and these rules should encourage and facilitate interchange lease arrangements in which an authorized foreign air carrier would operate an aircraft to an interchange point at which the U.S. air carrier would take operational control for operation over its routes. Commuter air carriers should find this amendment especially beneficial in obtaining aircraft for use in providing essential air service to small communities.

Description of the Amendments

To implement Pub.L. 96-192, §§ 121.153, 127.71, and 135.25 of the FAR are amended to allow a U.S. air carrier to operate, in common carriage and for the carriage of mail, a civil aircraft which is leased or chartered to it without crew and is registered in a foreign country which is a party to the Chicago Convention. There are four specific requirements which must be met under each of the sections specified above.

First, the aircraft is required to carry an appropriate airworthiness certificate issued by the country of registration and meet the registration and identification requirements of that country. This is necessary to comply with the Chicago Convention.

Second, the aircraft is required to comply with all the requirements in the FAR that would be applicable if the aircraft were registered in the United States. This includes all the requirements which must be met for the issuance of a U.S. standard airworthiness certificate, although a U.S. standard airworthiness certificate will not be issued for the aircraft. The foreign-registered aircraft and its operation must comply in all respects with the FAR as if it were a U.S.-registered aircraft operated by the air carrier. This ensures that there is no reduction in the level of safety currently provided by U.S. air carriers. The aircraft type design must be approved under a U.S. type certificate and the particular aircraft involved must meet the requirements for a U.S. standard airworthiness certificate, except the requirement for a U.S. registration certificate. With respect to the aircraft being approved under a U.S. type certificate, the proposal has been editorially revised in this final rule by the addition of the clause "is of a type design which is approved under a U.S. type certificate" immediately following the second word "aircraft" in §§ 121.153(c)(2), 127.71(b)(2), and 135.25(d)(2). This change uses more technically correct language and is not a substantive difference from the discussion of the proposal which said that the aircraft type design must be type certificated by the FAA. This means the aircraft must conform to the FAA type certificate and be in a condition for safe operation, including compliance with all effective U.S. and foreign airworthiness directives, maintenance, and life-limited parts requirements. Certification and maintenance rules, operating and equipment rules, and pilot certification, qualification, checking, training, and competency rules applicable to the operation of a U.S.-registered aircraft of the same type also would apply. However, the foreign-registered aircraft is not eligible for, nor would it receive, a U.S. standard airworthiness certificate or be registered in the United States. In addition to the requirement to hold a U.S. airman certificate, it may be necessary for the airman to hold an appropriate foreign airman certificate.

It is implicit in the amendments to §§ 121.153, 127.71, and 135.25 that the foreign-registered aircraft must comply with the noise and engine emissions provisions of the FAR to the same extent that a U.S.-registered aircraft is required to comply for the operations conducted. For example, compliance must be shown with the requirements of the "new production" (§ 36.1(d)) and "acoustical change" (§ 36.7) rules and the operating

noise limits rule in Subpart E of Part 91 as if the aircraft were (or would be) certificated and registered in the United States. Thus, a U.S. air carrier operating a foreign-registered aircraft must include that aircraft in the compliance plan/status report submitted to the FAA under § 91.308. In addition, if the FAA adopts or amends any other noise or engine emissions requirements applicable to U.S.-registered aircraft, those requirements would apply to foreign-registered aircraft operated by U.S. air carriers under any rules adopted as a result of this rule.

Third, to enable the FAA to have a listing of all foreign-registered aircraft operated by U.S. air carriers, the certificate holder must file a copy of the lease or charter agreement with the FAA Aircraft Registry at Oklahoma City.

Finally, these amendments provide that the aircraft must be operated by airmen employed by the certificate holder. This is consistent with the requirement in Pub.L. 96-192 that the lease or charter be without crew.

Immediate Adoption

Since these amendments are needed to implement a statute, and are relaxatory, I find that good cause exists for making them effective in less than 30 days.

Adoption of the Amendments

Accordingly, Parts 121, 127, and 135 of the Federal Aviation Regulations (14 CFR Parts 121, 127, and 135) are amended, effective October 16, 1980.

(Sections 313(a), 601, 603, 604, 610(b), 611, and 1108(b), Federal Aviation Act of 1958 (49 U.S.C. §§ 1354(a), 1421, 1423, 1424, 1430(b), 1431, and 1508(b)); Section 6(c), Department of Transportation Act (49 U.S.C. § 1655(c)))

Note—The FAA has determined that this document involves a regulation which is not considered to be significant under Executive Order 12044 as implemented by the Department of Transportation Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). A copy of the final evaluation prepared for this action is contained in the regulatory docket. A copy of it may be obtained by writing to the individual listed above as the information contact.

Amendment 127-42

Air Traffic Control Radar Beacon System and Mode S Transponder Requirements in the National Airspace System

Adopted: January 29, 1987 **Effective: April 6, 1987**

(Published in 52 FR 3380, February 3, 1987)

SUMMARY: This action establishes requirements pertaining to the use, installation, inspection, and testing of Air Traffic Control Radar Beacon System (ATCRBS) and Mode S transponders in U.S.-registered civil aircraft. The rule adopted continues to require a transponder for operation in each terminal control area (TCA) and in the airspace of the 48 contiguous states and the District of Columbia above 12,500 feet above ground level (AGL). Automatic pressure altitude reporting equipment, which is currently required in all of the above airspace except Group II TCA's, will be required in Group II TCA's effective December 1, 1987. The rule provides for a phased transition from ATCRBS to Mode S transponders in the National Airspace System (NAS) by limiting the manufacture and installation of ATCRBS transponders. After January 1, 1992, all newly installed transponders in U.S.-registered civil aircraft are required to meet the requirements of the technical standard order (TSO) for airborne Mode S transponder equipment.

The rule also permits ATCRBS transponders already installed on that date to be used indefinitely. Projected increases in air traffic will require improved aircraft location and identification information, which will be provided by the Mode S and automatic pressure altitude reporting equipment. These requirements are an essential component of the NAS Plan. Mode S is also a necessary technical prerequisite to obtain data link services which allow digital exchange of information between aircraft and the ground. The FAA will provide these services beginning on/about 1990. This action also sets forth test and inspection requirements for the Mode S transponder and a new output power test requirement for the ATCRBS transponder.

EFFECTIVE DATE: April 6, 1987

FOR FURTHER INFORMATION CONTACT: Mr. Gene Falsetti, Airspace and Air Traffic Rules Branch, Airspace—Rules and Aeronautical Information Division, Air Traffic Operations Service, Federal Aviation Administration, 800 Independence Avenue, S.W., Washington, D.C. 20591; telephone: (202) 267-9249.

SUPPLEMENTARY INFORMATION:

The three kinds of aircraft equipment addressed by this rulemaking are as follows:

Air Traffic Control Radar Beacon System, (ATCRBS). A radar system in which the aircraft to be detected is equipped with a radio receiver/transmitter called a transponder. Radar pulses transmitted from the ground are received by the transponder and used to trigger a distinctive transmission from the transponder. The controller's radar receives this transmission and displays a distinct and amplified return on the radar scope.

Mode S Transponder. The Mode S Transponder is an advanced version of the existing ATCRBS transponder. The Mode S transponder is completely interoperative and compatible with the current ATCRBS system. Mode S utilizes a discrete set of radio pulses (code) for each individual aircraft, and is not limited to the maximum 4,096 possible codes of the ATCRBS transponder. Mode S also adds the capability to provide a data link between the aircraft and the ground.

Mode C (Automatic Altitude Reporting Equipment). Some transponders are equipped with a Mode C capability. Mode C is that function of a transponder which responds to specific ground interrogations by transmitting the aircraft's current altitude in 100 foot increments. This information is received by ground equipment and displayed on the controller's scope in the data block for the transmitting aircraft. Mode C may be used with both ATCRBS and Mode S transponders.

History

On October 18, 1983, the FAA published an Advance Notice of Proposed Rulemaking (ANPRM) announcing the proposed use of Mode S transponders in the NAS (48 FR 48364, Notice No. 83-16). The following was proposed to take effect by 1992 or earlier, as noted:

1. Issuance of a technical standard order (TSO) for airborne Mode S transponder equipment. With issuance, TSO authorization to manufacture ATCRBS transponders would be terminated effective in 1986.

2. Amendment of Federal Aviation Regulations (FAR) Part 43 to include tests and testing procedures appropriate to Mode S transponders.

3. Amendment of FAR Part 91 as follows:

a. Newly installed transponders in U.S.-registered civil aircraft would meet requirements of the new TSO for airborne Mode S transponder equipment.

b. Either a Mode S or ATCRBS transponder, as well as automatic pressure altitude reporting equipment, would be necessary to operate in TCA's.

c. Either an operable Mode S or ATCRBS transponder, as well as automatic pressure altitude reporting equipment, would be necessary above 12,500 feet MSL in U.S. airspace. The proposal would retain the current exception for gliders above 12,500 feet MSL and retain provisions for helicopters and air traffic control (ATC) authorized deviations.

d. Automatic pressure altitude reporting equipment would be required for operations in Group II TCA's.

4. Amendments to FAR Sections 121.345(c), 127.123(b), and 135.143(c) to be consistent with the amendments to Part 91.

Comments—Proposed Introduction of Mode S

Comments were generally favorable to the proposed introduction of Mode S in the NAS. Twelve (12) comments were received which, though generally supportive, expressed some concern in several areas.

The areas of concern centered on:

1. The ramifications to U.S. manufacturers, foreign governments, and various international users regarding early cutoff of the TSO authorization to manufacture ATCRBS transponders in 1986.

2. The need for improved accuracy of altitude data, improved automatic pressure altitude reporting equipment, and reduced quantization (i.e., smaller intervals of reported altitudes) of aircraft reported altitude in the Mode S environment.

3. The impact of the proposed installation requirement on the Department of Defense (DOD) and on general aviation aircraft owners and operators.

4. The impacts on pilot cockpit workload, awareness of other air traffic, and the vulnerability to errors in altitude reporting in an automated system.

5. The extent of U.S. airspace within which Mode S would be required.

6. The bottom-line services and benefits that Mode S offers users, particularly general aviation users, in the NAS.

On September 17, 1985, the FAA published a Notice of Proposed Rulemaking (NPRM) (50 FR 37674, Notice 85-16) which reflected consideration of the concerns expressed in response to the ANPRM.

1. The NPRM acknowledged that an early U.S. withdrawal of the ATCRBS TSO authorization would likely have an unnecessarily disruptive and adverse economic effect on U.S. manufacturers' international sales of the ATCRBS and in addition an adverse effect on the regulatory and certification processes of foreign countries. To meet the dual objectives of permitting the continued manufacture and sale of ATCRBS transponders for foreign distribution and consumption while accomplishing an orderly domestic phase-in of Mode S transponders, the FAA proposed a schedule of installation requirements applicable only to ATC transponder equipment installed in U.S.-registered civil aircraft. The schedule was as follows:

Mode C automatic pressure altitude reporting equipment would be required in Group II TCA's effective January 1, 1992.

Transponder equipment, except equipment reinstalled in an aircraft from which it was removed for maintenance, would be required to meet TSO performance and environmental requirements in accordance with the following schedule:

1. Through December 31, 1986:

Any class of ATCRBS transponder (TSO-C74b or TSO-C74c), as appropriate; or any class of TSO-C112 (Mode S).

2. January 1, 1987, through January 1, 1992:

Any class of ATCRBS transponder (TSO-C74b or TSO-C74c) if the equipment was manufactured before January 1, 1987; or any class of TSO-C112 (Mode S).

3. After January 1, 1992:

Any class of TSO-C112 (Mode S).

As stated in the NPRM, the revised schedule was seen as providing several options to the U.S. civil aircraft operator. For example, the operator could use a previously installed ATCRBS transponder as long as it could be maintained. Through December 31, 1986, the operator could elect to replace a previously installed transponder or install a newly manufactured or used ATCRBS or a Mode S transponder meeting appropriate TSO specifications. From January 1, 1987, through January 1, 1992, the operator could elect the same options with one restriction. If the operator elects to install a new or different ATCRBS transponder, it must have been manufactured prior to January 1, 1987.

2. With respect to the concerns relative to improved accuracy of altitude data, improved automatic pressure altitude reporting equipment, and reduced quantization of aircraft reported altitude, the FAA agreed there would be benefits from greater precision in automatic altitude reporting. However, the agency maintained that each area would require separate development of the associated technology and procedures; and in each case, the FAA would seek public and industry input on the specific proposal. In addition, the existing equipment and procedures were determined to be fully adequate to support the additional reporting requirements proposed in the NPRM. For the above reasons, and because the suggested improvements were beyond the scope of the NPRM, the FAA determined it would not be appropriate to incorporate such suggestions in the Mode S NPRM. The agency did announce it would consider the institution of separate rulemaking for adoption of the requested improvements.

3. It was also recognized in the NPRM that an early cutoff of the ATCRBS TSO would adversely affect DOD equipage plans for its sizeable fleet. Accordingly, the FAA stated in the preamble to the NPRM that it proposed to permit continued manufacture of ATCRBS transponders to correspond to the DOD Mark XV implementation schedule.

4. The preamble to the NPRM also recognized the concern expressed concerning the adverse effect a "silent" Mode S data link environment would have on overall pilot traffic awareness and pilot workload in the cockpit. Again, these concerns were considered to be well beyond the scope of the NPRM. The FAA stated in the NPRM that in its implementation of data link, the agency would involve the public in its studies of all factors associated with each kind of message being considered for data link.

5. The concerns relative to the impact of Mode S on general aviation were articulated by the Aircraft Owners and Pilots Association (AOPA). AOPA's position was that the benefits of Mode S would accomplish acceptance of Mode S on a voluntary basis and that it should not be mandated. AOPA also questioned the benefits of Mode S to low altitude traffic. AOPA went on record as opposing Mode S if it were mandated above 6,000 feet. AOPA did recognize that the FAA proposal was to mandate Mode S or ATCRBS above 12,500 feet and within TCA's.

FAA responded to the issues of bottom-line benefits, scope of airspace wherein Mode S is proposed, and service capabilities with a summary of the benefits of the NAS Plan. The goals of the NAS plan were broadly presented in the preamble of the NPRM as those designed to meet the pressures of increased demands for aviation services, limit costs, and provide and improve facilities. The preamble further stated that the plan for Mode S is incorporated in the NAS Plan because Mode S is considered to provide the airborne data link capability in NAS. The following excerpts from the NPRM describe in summary the NAS Plan and the role of Mode S in the NAS.

The NAS Plan is a comprehensive plan supported by large increases in automation to yield significant improvements in service and cost savings to the airspace user, the taxpayer, and the ATC system. Cost savings are expected through reductions in delays and fuel consumption due to improved traffic handling capabilities and the increased ability of the ATC system to accommodate direct, pilot-preferred routings. The effectiveness of NAS is expected to be dependent, in great part, upon a surveillance system which can provide accurate position information, relatively interference-free aircraft identity through selective addressing, and automatic pressure altitude reporting equipment. The Mode S transponder, coupled with its associated automatic pressure altitude reporting equipment, is considered a key piece of avionics necessary to participate fully in and receive the benefits of the NAS.

To summarize the role of Mode S in the NAS, Mode S is an advanced secondary radar system expected to provide improved accuracies in the surveillance of aircraft position and more interference-free identity and altitude reports to ATC.

Comments on the NPRM

The NPRM comment period expired December 16, 1985. At the request of the Air Transport Association (ATA), the comment period was reopened. The reopened period extended from February 14 to

March 3, 1986 (51 FR 5686, Notice 85-16). A total of 15 commenters responded during both the original and reopened comment periods. There was general support and acceptance of the proposal. However, those in support of the proposal did express certain reservations and suggestions for improvement. Those in general support of the proposal but with comment and suggestions were the Air Traffic Control Association (ATCA), Air Line Pilots Association (ALPA), Soaring Society of America (SSA), Experimental Aircraft Association (EAA), General Aviation Manufacturers Association (GAMA), Air Transport Association (ATA), the State of Montana, the Aerospace Industries Association of America (AIAA), Rockwell International, and Allied Bendix Aerospace. Those generally opposed to the proposed introduction of Mode S into the NAS were the Aircraft Owners and Pilots Association (AOPA), the National Business Aircraft Association (NBAA), Foster Airdata, and two private citizens.

Issues

A common element in the comments was a perception that the agency is proceeding too quickly in mandating Mode S. Many commenters stated or implied that the FAA is accelerating the Mode S transponder requirement without giving due regard to the need for allowing a reasonable acceptance period on the part of all parties affected. Those identified as being affected by an accelerated transition from ATCRBS to Mode S equipment included the manufacturers who must design, develop, produce, and market Mode S; aircraft manufacturers who design and manufacture their aircraft cockpits to accommodate installation of Mode S; installers; and general aviation owners and operators who will make the ultimate decisions to purchase and install it.

The following are the major issues and related subissues presented in the public comments.

Major Issues—

a. Mode S is costly.

b. The proposed installation schedule for Mode S transponders creates problems for:

—Avionics manufacturers

—Aircraft manufacturers

—Airlines

—Owners and operators who believe they may be forced into making two purchase decisions, an initial one for a surveillance transponder, and a subsequent purchase when added data link services become available. In addition, commenters representing general aviation believe the general aviation operators may be forced into purchasing a transponder whose benefits are questionable.

c. Data link services to be available are indefinite. FAA has made no commitment to data link, causing uncertainty as to when and what services will be available.

Other issues—

There were a number of other issues and subissues raised. They are as follows:

1. There is no justification for automatic pressure altitude reporting equipment in Group II terminal control areas (TCA). On the other hand, other commenters expressed the opposite view. That view was that there is a recognizable need for automatic pressure altitude reporting equipment and its use should be required by separate rulemaking.

2. The recent decline in aviation growth does not bear out original NAS plan estimates and it makes the mandating of Mode S transponders unnecessary.

3. There are deficiencies and problems with the proposed transponder tests.

4. There are performance weaknesses and deficiencies associated with Mode S, data link, and Mode C altitude reporting equipment.

5. Use of Mode S with data link would create a "silent" environment, as opposed to today's "party line" voice communications environment. A silent environment is hazardous to flight safety.

6. The Mode S requirements may adversely affect DOD fighting capability.

7. The U.S. may be breaking International Civil Aviation Organization (ICAO) agreements if it issues a rule without international approval.

8. Issuance of Mode S requirements prior to issuance of the Mode S TSO is premature.

Discussion of major issues.

a. Major issue number 1: Mode S is costly. Generally, concerns were expressed that Mode S transponders could impose a financial burden on the industry and that the FAA seems little concerned

that added costs will have the greatest effect on the general aviation fleet. Major concerns associated with cost were—

(1) Mode S transponder prices, even before data link is added, will be higher, creating a smaller market, which in turn will drive the cost even higher.

The effect of higher prices would be to freeze or reduce the transponder equipage levels at the lower end of the fleet.

(2) Mode S transponders with data link will cost more because they are significantly more complicated and complex.

One commenter said that FAA's finding in its economic evaluation that the difference in cost between the ATCRBS and a basic Mode S transponder would be approximately $600 after a break-in period, was fallacious. This was said to be so because if real-time weather and automated ATC data link communications are the Mode S benefits, a surveillance-only transponder would not be very marketable. In other words, to take full advantage of data link and automation benefits, the Mode S transponder will be considerably more complicated, and therefore more costly, than a surveillance-only transponder.

(3) There may be a need to make more than one buy of a Mode S transponder.

One commenter said that without any real FAA definition of what if any data link services might be available, an operator might at first buy a basic Mode S transponder and subsequently be faced with a decision to buy another more expensive model when and if operationally effective data link services become available. On this issue, the ATA suggested that data link, at least at the basic communications level, should be required by regulatory schedule. This would permit introduction of data link for ATC purposes, without requiring replacement of the basic transponder. It would also permit reasonable investment decisions for equipment to be installed at earlier dates.

(4) Mode S transponders will have a negative cost impact on small helicopters and airplanes, and on the DOD fleet.

This commenter said the DOD would feel a great impact because of its large new fleet which would be introduced during transition to Mode S. The U.S. Army alone has nearly 10,000 helicopters now, most of which are being replaced by new helicopters which could be required to carry advanced navigational capabilities of ATCRBS and Mode S equipment. The commenter concluded that the proposed requirement seemed to be excessively redundant and expensive.

Discussion of cost issue.

Under the narrow-demand, higher-price, and resultant equipage-freeze theory, the industry would produce fewer transponder options if there is a narrow base of demand, focusing on the higher end of the market (with built-in data link). FAA discussions with marketing representatives of two manufacturers of transponder equipment did not support this scenario. Both companies advised they expect to continue to produce mainly for a major portion of the market. They do not expect any significant contraction in the demand for their transponders in the 1990's in large part because of the expected existence of a substantial retrofit market. With regard to the market as a whole, although there has been a dramatic decline in the production of general aviation aircraft in recent years, the size of the total fleet and the number of hours flown have remained fairly constant or increased somewhat. Furthermore, the manufacturers have the freedom to produce basic Mode S equipment that will be upgradable or have data link capability, thereby enhancing its attractiveness to potential purchasers of smaller aircraft.

Some commenters noted that the price difference quoted in the rule between Mode S and ATCRBS transponders does not include data link and that there are very few or no advantages for a Mode S transponder without data link. The manufacturers' ability to produce basic, upgradable equipment, as expressed above, is expected to help resolve this problem.

With respect to the issue of basic Mode S advantages/disadvantages, the FAA recognizes that data link is a major benefit of equipping with a Mode S transponder. The agency also believes that most users will eventually opt to equip with data link. There are however, two basic advantages of Mode S transponders that accrue to users that derive from the capability to enhance ATC services. One is the unique address portion of the Mode S transponder which makes possible the automatic association and display of the transponder reply with aircraft registration on the ATC radar scope. The other is that when a Mode S transponder operates with a Mode S ground system, certain kinds of radio interference present in high-density traffic environments are reduced below the level experienced with an ATCRBS transponder. Not all of the garbling problems with the ATCRBS transponders and ATCRBS ground station can be eliminated by upgrading the ground station or the transponder.

There is also more to the cost issue when considered in conjunction with Mode S with data link capability. The FAA had considered a requirement that would have included some level of data link with every Mode S transponder, but rejected it for two reasons. First, the agency believes that most users desire that the device mandated by the rule be as simple as possible—a number of commenters obviously preferred a device even simpler than Mode S. Second, FAA believes that a rule mandating data link would unnecessarily limit the flexibility of manufacturers to develop a range of capabilities. That range might be described as follows. At bottom is the user who is aware of the benefit of improved ATC surveillance, but has no use for the kinds of information envisioned for data link. A middle range may be the visual flight rules (VFR) operator with a simple display device to obtain weather services through data link. At the top of the line, one might find a frequent instrument flight rules (IFR) operator needing display, a touch entry device, or even a printer to make a permanent record of data link messages to obtain weather and ATC services. By not making data link mandatory, the flexibility to meet these needs is retained as determined by the marketplace and designers' innovations.

Comment regarding negative cost effects of the Mode S proposal on the DOD was not submitted by the DOD, but by private citizens. The DOD did not reply to the NPRM during the comment period but has since advised that it concurs with the proposal. In any event, under the transponder installation requirements of Section 91.24(a), the proposed Mode S requirements pertaining to transponder installations apply only to U.S.-registered civil aircraft.

b. Major issue number 2: the proposed installation schedule for Mode S transponders creates problems for avionics and aircraft manufacturers, airlines, and aircraft owners and operators. The major concerns expressed in this area were—

(1) Effects on avionics manufacturers. One of the proposal's alleged negative effects to avionics manufacturers was stockpiling. The NPRM proposed that an ATCRBS transponder could continue to be installed in a U.S.-registered civil aircraft after January 1, 1987, but only if it were manufactured before that date. Rockwell International commented that an effect of this requirement would be that manufacturers would have to stockpile ATCRBS transponders for 5 years (from January 1, 1987, to January 1, 1992). Stockpiling was also brought out by another commenter relative to the concerns expressed regarding production problems.

Another alleged negative effect to avionics manufacturers was that the proposal did not allow time which would be needed to design, develop, and produce Mode S transponders. Allied Bendix stated that the ATCRBS production must be moved closer to the January 1992 deadline. Since the typical product development cycle was said to be 18 to 24 months, Allied Bendix recommended that ATCRBS production cutoff for non-U.S.-registered civil aircraft should be 24 months prior to the Mode S implementation deadline. The ATCRBS production cutoff should then be December 31, 1989, if the January 1992 deadline were retained. Allied Bendix commented this would allow availability of equipment which incorporates the latest technology coincident with a market that would justify the investment required to introduce a new product. Otherwise, the company maintained it was left with the choice of either stockpiling ATCRBS transponders or foregoing this market opportunity.

In still another area of negative effect, a manufacturer said that because Mode S transponders would be more complex, they would be more expensive. Therefore, it would be more likely that ATCRBS transponders would be installed up to the 1992 deadline or until the supply of pre-January 1, 1987, transponders was depleted. A consequence of this would be that the onset of a general aviation market for Mode S transponders would be very uncertain.

(2) Effects regarding general aviation. There were several alleged negative effects of the proposal to general aviation, most of them associated with the cost/benefit issue. The NBAA maintained that owners in the lower-price end of the fleet would not equip with a transponder at all when faced with the unavailability of low priced ATCRBS transponders and no expectation of flying above 12,500 feet MSL or in TCA's.

On another related subissue, NBAA said that new hardware and software are 5 to 10 years in the future, and possibly even longer for the lower-price end of the general aviation market. Accordingly, the only foreseeable service that would convince the lower-price portion of the market to buy Mode S is improved real-time weather services.

Although not expressed in terms of specific effects to general aviation, the AOPA submitted several objections to the Mode S proposal questioning the value of Mode S primarily in terms of benefits and cost. In terms of benefits, AOPA submitted that while there may be some small incremental improvement in surveillance from use of Mode S, most, if not all, of the surveillance accuracy improvement will be attributable to the Mode S ground sensors and not the Mode S transponders. Accordingly, the FAA

should permit sufficient time after Mode S ground sensors are operational for an objective evaluation of their value prior to forcing an airborne transponder retrofit to achieve a marginal improvement in accuracy. AOPA's other concerns with the impact to general aviation owners/pilots were expressed in terms of cost. For example, AOPA reiterated the concern that Mode S transponder prices would be higher. As a result, purchases would be down, essentially freezing equipment levels in the low end of the fleet. These concerns are discussed under the cost issue above.

Comments of the SSA noted the effects of the proposal on general aviation with respect to consumer choice. SSA agreed with AOPA that service benefits of Mode S, rather than regulation, should be relied upon to motivate pilots to upgrade their equipment. Mode S services must be made available to general aviation aircraft operating below 10,000 feet MSL and not be reserved for jet-powered, high-altitude traffic. For this reason, Mode S should not be made mandatory after January 1, 1992. SSA concluded that ATCRBS should be permitted to be manufactured and installed as long as it does not interfere with either the surveillance system or services.

With respect to what was perceived as an unjustified installation requirement of Mode S transponders, the lack of consumer choice was an issue raised by two other commenters. One comment was that Mode S development will require at least 2 years from the availability of TSO-approved Mode S airborne equipment. The commenter referred to the NPRM which stated that only one Mode S ground radar is expected to be operational by 1988 at an unspecified location. Another commenter voiced a similar concern by saying that under the NPRM, users will be forced to equip with airborne Mode S before the ground stations can provide the same coverage as the older ATCRBS. The commenter's conclusion was that FAA's plan for forcing airborne Mode S equipage is premature.

(3) Effects on aircraft manufacturers. One commenter pointed out that because of technical parameters and data link capability, the Mode S transponder is not physically interchangeable with the ATCRBS transponder and, therefore, current aircraft designs cannot accept Mode S. The commenter suggested that new radio rack mounts, new control panels, new wiring, new cooling, and an additional antenna are needed to accommodate the new installation.

The problem facing manufacturers was also raised by several commenters as a retrofit problem for aircraft operators. Several commenters maintained that a formidable effect of the Mode S proposal would be the problem of retrofitting Mode S transponders in cockpits not adequately designed to accommodate the new equipment. One said that current aircraft designs do not accept Mode S. Installation design changes will be necessary and a development flight test will be required to assure antenna locations and operating characteristics are acceptable. Another suggested that retrofitting of older aircraft should remain voluntary except for aircraft operating in those areas where radar coverage is degraded by high-density traffic.

(4) Effects on airlines. The ATA advised that the proposed installation schedule would affect airlines. When a transponder is removed for maintenance, airlines routinely replace it with another unit and do not reinstall the same transponder equipment in the same aircraft each time.

The defective box is taken to the avionics shop for repair and subsequently installed in a different aircraft within the fleet. Under the proposed January 1, 1987, cutoff date associated with ATCRBS transponders, airlines would be required to retrofit all aircraft prior to the January 1, 1992, Mode S date.

Discussion of installation issues.

The FAA believes that most of the concerns of and effects upon the avionics and aircraft manufacturers, owners/operators, consumers, and airlines can be alleviated by—

(a) changing the last manufacturing cutoff date for ATCRBS transponders which may be installed in U.S. aircraft from December 31, 1986, to December 31, 1989. The additional three years will provide an extended time period within which affected users may effectively plan for transition from ATCRBS to Mode S;

(b) modifying the installation requirements so that—

(1) a transponder that meets requirements of TSO C74b or TSO 74c, and that is manufactured before January 1, 1990, may be removed from an aircraft for maintenance and/or repair, and then be reinstalled on the aircraft from which it was removed. Also, a correctly functioning transponder which meets the requirements of the appropriate TSO may be installed on the aircraft temporarily while the malfunctioning transponder is being repaired.

(2) for fleet operations, a transponder that meets the requirements of TSO C74b or TSO C74c may be removed from an aircraft for maintenance and/or repair, and then be installed on either the

aircraft from which it was removed or on another aircraft in the same fleet. Equipment transferred among fleet aircraft will be considered permanent equipment and not "substitute equipment" under the provision for temporary replacement sets. Accordingly, any equipment installed for the first time in an aircraft of a particular operator's fleet after January 1, 1992, must meet the requirements of TSO-C112 (Mode S).

The FAA believes that the above changes to the installation requirements which appear in the final rule may be expected to:

(i) Eliminate the problem of stockpiling.

(ii) Clarify onset of a Mode S market.

(iii) Allow time for aircraft manufacturers to ensure that new aircraft designs provide adequate space, wiring, etc., to accommodate Mode S equipment; and

(iv) Allow time for operators/consumers to plan for retrofitting which is not mandatory but which could take place in the 1990's as owners/operators consider replacement of ATCRBS transponders.

With respect to the issue of the reluctance to install a Mode S transponder because of associated increased costs, the FAA views as insignificant any disincentive to buy a Mode S transponder because a basic unit costs more than it does today. Most voluntary transponder equipage is due to the perceived benefit in obtaining ATC services. Those services will continue and will be enhanced with Mode S. We believe that users will see that cost as being justified. If some users do not see it as being justified, the rule provides ample time for low end users to equip with ATCRBS transponders, the life of which should extend to near the end of the century.

The proposed rule did not expressly provide for the use or installation of ATC transponders which were manufactured under TSO-C74 or TSO-C74a. The existing rule requires that transponders installed after January 1, 1974, or used after July 1, 1975, meet the requirements of TSO-C74b or TSO-C74c. However, the use of the TSO-C74 and TSO-C74a equipment after July 1, 1975, could be approved by the Administrator if the operator submitted data showing that the equipment met the performance standards of the appropriate class of TSO-C74c and environmental conditions of the TSO under which it was manufactured.

Any equipment which qualified under this provision would be more than eleven years old at this time. While the rule adopted does not make specific provision for such equipment, the FAA will permit the continued use of any equipment manufactured under TSO-C74 or C-74a, if still in use, if that equipment meets the performance standards of TSO-C74c and the environmental standards of the TSO under which it was manufactured.

(c) Major issue number 3: Data link services to be available are indefinite; they lack FAA commitment; operators do not know what data link services will be available nor when. Uncertainty in this area is also likely to be costly to consumers faced with a decision to purchase Mode S transponders (the latter part of this issue is discussed under the cost issue).

Several commenters noted that the FAA made no commitment in the proposal to data link applications, even though data link was put forth as one of the basic benefits to come from the Mode S transponder. Moreover, to obtain the benefits of data link, more equipment would be required, e.g., displays, printers, and input/output devices. This leads to cost and retrofitting problems. The AOPA commented that any forced transition to Mode S transponders should begin only after the FAA, in concert with the aviation user community, has decided what services will be provided on the data link and has created a plan which ensures that investments in equipment to obtain those services will be justified.

Discussion of the data link issue.

While the FAA has not to date issued any rulemaking or technical standards specifically relating to data link, the agency is now engaged in preparation of a data link master plan and the development of a data link program. The FAA expects that informational data link services will be available within a year of the first operational Mode S sensors. In addition, the FAA agrees that there is a need to stimulate aircraft owners to purchase Mode S transponders by accelerating data link development. Data link development to date has been system oriented and has concentrated on the NAS components that are necessary for data link. Agency personnel are meeting with user groups to develop implementation priorities and a schedule which is compatible with the Mode S transponder rule schedule.

With regard to the products and services that the FAA expects to have available for users, the FAA objectives are to—

(a) Develop and implement data link applications which improve aviation safety and efficiency and stimulate Mode S transponder equipage;

(b) Provide data link services at the earliest date that equipment and data base availability permit; and

(c) Provide a focal point for all domestic and international aviation data link standards.

Weather information is currently scheduled to be the first data base available. Therefore, weather services are expected to be the first group of services offered using Mode S data link. The initial set of potential services within this group are terminal forecasts, surface observations Automated Surface Observation System data, Automated Weather Observing System data, winds aloft forecasts, pilot reports, radar summaries, and hazardous weather advisories. The initial implementation of these services may be on a request/reply basis. As the system matures, these services can be provided to a pilot in a more automated manner.

The second group of potential services expected to be available are expanded weather and airport services. These include the Automated Terminal Information System, wind shear alerts, and runway surface winds.

The third group of potential applications expected to be available are initial ATC services. These applications include transfer of communications, altitude assignment confirmation, flight identification, minimum safe altitude warning, traffic information, and uplinking of aircraft position data.

The fourth group of potential applications expected to be available are dependent on the implementation of the advanced automation system. These applications include en route metering, automatic flight service hazardous weather, weather graphics, and clearance delivery.

Each of the above groups of services depends upon specific equipment and data base availability. The indicated order of group implementation reflects the current FAA schedules. The implementation schedule of a data link application within a group depends upon its acceptance by the users and the maturity of the concept. One of the data link program objectives is to provide the greatest number of data link services in the shortest time span.

In regard to the issue of requiring data link, the FAA had considered specifications that would have required some level of data link with every Mode S transponder, but rejected it for two reasons. The basis for rejection was that most users desire the simplest device possible; and secondly, FAA believes that a rule mandating data link would unnecessarily limit the flexibility of manufacturers to develop a range of capabilities that was described under discussion of the cost issue. In consideration of manufacturers' opinions in this area, the FAA has retained the manufacturers' flexibility to meet these needs in accordance with the marketplace and product innovations and not by regulation.

Discussion of other issues.

Issue number 1: The need for automatic pressure altitude reporting equipment.

The NPRM proposed an effective date for requiring Mode C equipment in Group II TCA's of January 1, 1992. For reasons discussed below, the FAA has adopted an effective date in the final rule of December 1, 1987. The basic justification for extending the requirement to Group II TCA's remains the same. The comments which addressed the Mode C issue focused on the need for Mode C in Group II TCA's and on the inclusion of Mode S and Mode C requirements in the same rule, but not on the implementation date for the Mode C requirement.

AOPA opposed the use of Mode C in Group II TCA's saying the FAA had not provided a rationale for extending the use of Mode C transponders to additional airspace. AOPA believes there is little evidence to show that it can help to improve ATC system safety and challenged FAA claims that Mode C would increase ATC effectiveness through greater selectivity in viewing targets or that it would reduce the number of traffic advisories or avoidance vectors. AOPA said that TCA's should be considered individually, and rulemaking action should be taken if it becomes clear that a location warrants such exclusionary provisions based upon traffic volume, complexity, aircraft mix, controller workload, and frequency congestion.

In another view, two commenters said that it would be inappropriate to include two complex issues in one rule, and that Mode S and Mode C should be handled by separate rulemakings.

The FAA does not agree that the use of Mode S transponders and automatic pressure altitude reporting equipment should be separate rulemaking actions. The required use of altitude reporting

equipment in Group II TCA's is not a separate issue; rather, it is an extension of its current application in Group I TCA's and above 12,500 feet MSL. Neither can its use be regarded as separate and unrelated to the use of Mode S transponders since its use will logically be required in the same airspace areas where Mode S transponders will be required. Automatic pressure altitude reporting equipment has been required and has been in proven use in conjunction with ATC transponder equipment in Group I TCA's and above 12,500 feet MSL since 1973. The equipment has been used to provide essential aircraft identity, location, and altitude information in those airspace areas where such information provides a fundamental base in providing airspace users safe, orderly, and efficient use of available airspace.

Experience has shown that Mode C has been particularly beneficial in the higher density TCA airspace environment. It was in consideration of this environment that Task Group 1-2.1 of the National Airspace Review (NAR) recommended use of Mode C to reduce radio frequency congestion. The task group's rationale, as stated in Notice 85-16, was that this reduction was necessary to create more efficiency within the system thereby increasing capacity while providing an increased level of safety over operations with non-Mode C aircraft. In particular, the group pointed to weather conditions which cause pilots of VFR aircraft to change altitude to maintain appropriate separation from clouds. In a high density environment, this altitude change is not immediately forwarded to the controller. However, the Mode C readout on the controller's radar display does provide this information. The task group's conclusion was that in busy, complex areas with high concentrations of traffic, a continuous readout of aircraft altitude is a necessity for maintaining a continuous three-dimensional (range, azimuth, altitude) view of the traffic picture.

The FAA concurs with the finding of the NAR task group. The FAA also recognizes that the NAR task group envisioned use of Mode C equipment within a single class of TCA whose proposed establishment criteria were somewhat lower than current Group I TCA criteria and somewhat higher than current Group II criteria. Although the NAR task group related the Mode C requirements to a single class of TCA, the FAA expects similar benefits from use of Mode C in the airspace environment of today's current Group II TCA's. That environment is examined in more detail below.

The designation of a terminal area as a Group II TCA indicates that it is a higher density terminal area which presents complex air traffic conditions resulting from a mix of large turbine-powered air carrier aircraft with other aircraft of varying performance characteristics. There is no reason to believe that the complex nature of a high-density environment, as typified by a Group II TCA, will be altered by slower than expected growth in traffic or even the unlikely event of a sustained static level of traffic into the next decade and beyond. The requirements of the Group II TCA are basic to that environment and they are essentially common to the requirements of a Group I TCA. Furthermore, the requirements are generic in the sense that they could apply to any classification of airspace with similar characteristics. They are requirements designed to afford the greatest protection for the greatest number of people by providing ATC with an increased capability to provide aircraft separation service to minimize the hazardous mix of controlled and uncontrolled aircraft.

The amendment adopted prohibits operation in a Group II TCA without operating Mode C equipment, effective December 1, 1987. The requirement adopted is the same as that proposed in the NPRM except for the earlier implementation date. In consideration of the benefits of having each aircraft in TCA airspace equipped with Mode C, as discussed immediately above, the FAA believes that this requirement should not be postponed to 1992 as originally proposed. In addition, one or more other rulemaking projects under consideration by the FAA at this time would almost certainly have the effect of requiring Mode C in Group II TCA's long before January 1, 1992. These actions include:

- The establishment of a single category of TCA, in which Mode C would be required. This action was recommended by the NAR and also by a TCA Review task group established by the FAA in September 1986, and is part of the airspace reclassification rulemaking now in progress (FAA Docket No. 24455, 50 FR 5055; Docket No. 24456, 50 FR 5046, February 5, 1985).
- The requirement for use of a traffic alert and collision avoidance system (TCAS). The FAA has announced its intention to issue an NPRM by November 1987 proposing to require the installation and use of TCAS equipment by certain operators. The TCAS II system to be proposed will issue traffic alerts for conflicting aircraft equipped with transponders, but will issue conflict resolution advisories only for aircraft equipped with Mode C.

Also, the FAA has received separate petitions for rulemaking, from the Air Line Pilots Association and the Air Transport Association, requesting that the requirement for Mode C equipment be extended to additional terminal areas and other airspace. The FAA has not acted on either petition at this time. Finally, language included by the House Committee on Appropriations in the report on a recent spending resolution (H.J.Res. 730) stated the committee's intent that the FAA substantially expand the airspace in which Mode C equipment is required.

Requiring Mode C equipment in Group II TCA's effective December 1, 1987, rather than January 1, 1992, advances the date by which some operators must acquire Mode C but does not otherwise alter the requirement proposed in the NPRM. The equipment required is common avionics equipment now installed on the aircraft used by most Part 121 and Part 135 operators and many general aviation operators. An adjustment in the implementation date from 1992 to 1987, therefore, does not present any new issues with respect to availability of equipment or costs to operators.

In summary, the FAA believes the benefits of a Mode C requirement in Group II TCA's clearly support the implementation of that requirement at the earliest practical time. An effective date of December 1, 1987, will provide affected operators sufficient time to acquire the Mode C equipment if necessary. The issues related to the expanded Mode C requirement were presented and discussed in the NPRM and the comments received, and the agency has determined that further notice is not required.

Issue number 2: There has been a decline in aviation growth that does not bear out NAS estimates and which makes the mandating of Mode S transponders unnecessary. AOPA said it is clear that the traffic projections upon which the NAS Plan was based in 1980 substantially exaggerate the growth and density of aircraft in the U.S fleet. The increases suggested will not happen, and any transponder mandate based on those forecasts is misguided at best.

The initial estimate that 19.9 billion in cost savings or benefits over the years 1981-2000 is expected to result from NAS improvements was derived on the basis of a 1981 equivalent system. In other words, the improvements of the NAS were quantified by estimating the cost savings expected to result from a reduction in delays, improved fuel-efficient routing, reduced accidents, and reduced operating and maintenance costs, using as a baseline for comparison the higher expected costs of operating and maintaining the 1981 system in a manner to provide the same level of service to more aircraft. The extent of these benefits was estimated on the basis of the projected increase in traffic levels over the years 1981-2000, which in turn are based on projected increases in the active fleet. The benefits of Mode S estimated in the initial economic evaluation were based on fleet projections made in early 1985 rather than in 1980-81, as the commenter apparently believes was the case. The 1987 projection, which was just released, takes account of declining production trends in general aviation aircraft over the past 5 years as it forecasts a total of 219,300 airplanes in this category as of the year 1998, which is about 40,000 lower than last year's projection. The 1986 estimate of NAS improvement benefits has been reduced to 16 billion mainly to reflect the lower forecasts of aviation activity. The reduction in the fleet of about 15 percent is considerably less than the 50 percent decrease cited by one commenter and has had a proportionately smaller downward effect on the magnitude of expected benefits. In any case, the benefits of an upgraded NAS that were estimated 1 year ago are likely to be realized eventually even if the underlying forecast may have been too optimistic, because the total civil aviation fleet is still expected to increase over the foreseeable future if at a slower pace.

Issue number 3: There are deficiencies and problems with transponder tests. Several concerns were raised in this area. One commenter said there would be increased reliance placed on future transponders, especially on data link; therefore, there is a question whether the frequency with which ATC transponders are required to be tested is adequate.

In reference to the proposed additional testing of transponder output power, another commenter said that unless the FAA can demonstrate that inadequate output from current transponders is causing a degradation in system performance, this part of the rule should not be adopted.

AOPA stated that while it supports the transponder test requirements, the length of time between inspection and test could easily be extended from 24 to 36 months. Inspections conducted at that interval would assure proper operation but would offset the increased cost of performing the more complex tests both for Mode S and ATCRBS devices.

The current transponder tests and inspection requirement are based on the experience gained with the ATCRBS transponders. At this time, the FAA has no data to substantiate either increasing or reducing the frequency of transponder tests and inspections. Prior to the implementation of the data link, the FAA expects sufficient experience with the Mode S transponder to determine if the frequency of testing should be changed.

The FAA believes that the additional testing of the transponder output power is necessary because it is obvious that inadequate output from transponders degrades the air traffic control system performance. If a transponder does not have sufficient output power to respond to an interrogation, the ATC system does not obtain identification of the aircraft.

The FAA does not concur with the AOPA suggestion that the length of time between inspection and tests could be extended from 24 to 36 months. The FAA has no data to support such a change. Older transponders, without solid-state output, tend to degrade in performance over time. Increasing the length of time between tests and inspection could result in some transponders being out of tolerance for longer periods of time.

Issue number four: There are performance weaknesses and deficiencies associated with Mode S, data link, and Mode C altitude reporting equipment.

Commenters alleged several technical deficiencies and weaknesses with the equipment with respect to both Mode C and Mode S equipment. One commenter said that the current trend to monopulse secondary surveillance radar (SSR)/monopulse ATCRBS may be jeopardized by the addition of any form of Mode S transponders in the airspace using the same ICAO radio channels, because, according to an in-depth British study, angular errors will increase. Another commenter said the Mode S proposal includes the likelihood of a degradation of the primary function of the radar beacon system in its mission of air traffic monitoring and ATC operations. The data rate of message exchanges is restricted by the radar antenna sweep rate which will limit message exchange windows to 120 milliseconds duration at 12 second intervals for en route and 40 milliseconds for terminal radars. Another commenter believes the FAA should defer the Mode S issue until it is proven that the ATCRBS/SSR Mode C, using monopulse techniques now being developed in Europe in the interest of greater accuracy, can no longer meet the national ATC needs.

Concerning the accuracy of Mode C altitude reporting equipment, AIA stated that there is a major problem with altitude reporting accuracy that has not been solved by Mode S; i.e., barometric altitude. Another commenter recommended that the FAA undertake, on a high priority basis, a research and development project to develop an accurate altimetry system to ensure that altitude reports by either ATCRBS or Mode S users will in fact be accurate altitudes. The commenter went on to say that to mandate a whole new system based on present altimetry techniques is premature and a shameful waste of money.

With respect to data link, one commenter maintained that data link hardware for the cockpit is yet to be determined. The packaging and human factors features are not specified. Manufacturers must determine how data will be uplinked and downlinked. Questions remain unanswered. In slightly different language, the ATA said that even though the characteristics of the Mode S transponder are reasonably well defined, the extent to which the data link functions may impact the hardware design is less clear. ATA concluded that it seems appropriate that FAA adjust the dates for transition to Mode S until the airborne architecture for Mode S data link has been firmed up.

Concern regarding need for improved accuracy of altitude data and improved automatic pressure altitude reporting equipment was one of the issues to surface from the original ANPRM. As stated in the NPRM and repeated earlier in the preamble to this rule, the FAA agreed there would be benefits from greater precision in automatic altitude reporting. However, this increased precision would require separate development of the associated technology and procedures. In each case, the FAA would seek public and industry input on the specific proposal. This continues to be the agency position on this issue. Also, in accordance with the previous position on this matter, the FAA believes the existing equipment and procedures are fully adequate to support additional reporting requirements proposed in this notice. The agency will consider the institution of separate rulemaking in the future for adoption of the requested improvements.

The introduction of Mode S transponders is not expected to affect adversely the introduction of monopulse ATCRBS or the angular measurement accuracy of air traffic monitoring operations. The compatibility of ATCRBS with present and future enhancements was considered by the International Civil Aviation Organization (ICAO) in its Secondary Surveillance Radar (SSR) Improvements and Collision Avoidance Systems Panel (SICASP). The panel approved a recommendation at its first meeting recognizing that compatibility had been demonstrated to exist between Mode S and ATCRBS. The panel further recommended that ICAO ensure the maintenance of compatibility of future SSR enhancements in the formulation of standards relating to these enhancements. The recommendation was subsequently accepted by ICAO.

With regard to data link concerns, the FAA believes that the revised Mode S installation schedule will also help provide for a longer transition period to develop and test equipment and procedures, validate benefits, and implement associated data link applications and procedures. Concerns regarding the uses, systems, practices, or procedures involving data link will be addressed through the appropriate procedures of FAA's data link program as evaluation data becomes available. These concerns therefore will not be addressed here since they are beyond the scope of this rule which is limited to the use, testing, and installation of ATCRBS/Mode S transponders.

Issue number 5: Use of Mode S with data link would create a "silent" environment, as opposed to today's "party line" voice communications environment.

According to one commenter, a silent environment is hazardous to flight safety. The commenter said the silent nature of the Mode S data link can lead to sending a message in error which, if undetected, can lead to a fatal accident. Currently, all pilots hear ATC instructions to all other proximate pilots and can catch inconsistent instructions to different aircraft in the same area. The party line would be lost if this rulemaking takes effect.

Contrary to the commenter's perception, the "party line" would not be lost as a result of this rulemaking. Though presented as a major benefit, data link is not being mandated by this rule. This same concern was expressed in response to the original ANPRM and responded to in the subsequent NPRM. These concerns were considered to be well beyond the scope of the NPRM. The FAA stated in the NPRM that in its implementation of data link, it would involve the public in its studies of all factors associated with each kind of message being considered for data link. This continues to be the FAA's position. The FAA recognizes there are advantages and disadvantages to both the party line and data link messages. The benefits to any data link service must outweigh the disadvantages before implementation. One of the objectives of the FAA's data link applications program will be to investigate the feasibility and desirability of providing some of the "party line" information which currently serves to congest voice frequencies over data link. Frequency changes are an example. If frequency changes were removed, voice channels are expected to be less congested, providing more time for users to better monitor other party line information.

Issue number 6: The Mode S requirements may adversely affect DOD fighting capability.

Two commenters believed that the DOD's fighting capability would be diminished by the Mode S rule. The impact of the Mode S transponder rule on the DOD was discussed earlier in this preamble under the major issue of cost. In that discussion, it was stated that comment regarding negative cost effects of the Mode S proposal on the DOD was submitted by private citizens. Even though the proposal did not apply to military aircraft, the DOD has advised the FAA that it concurs with the proposal and is voluntarily incorporating Mode S in its Mark XV transponder. In summary, the DOD has expressed no concerns that mandating Mode S transponders would adversely affect its mission.

Issue number 7: The U.S. may be breaking ICAO agreements if it issues a rule without international approval.

A commenter said that it appears from study of the ICAO charter, to which the U.S. has agreed, that no nation will unilaterally impose rules regarding avionics in its airspace which is available via bilateral ICAO agreement with at least 50 other nations. Another commenter stated that the U.S. should defer implementation of a Mode S requirement until there is full agreement in the ICAO that Mode S is essential and that states are permitted to mandate its use for aircraft of all nations. The U.S. cannot afford an ICAO confrontation.

In regard to the ICAO issue—

(a) There will be no conflict with ICAO. The installation requirement pertains only to U.S.-registered civil aircraft.

(b) If ICAO believes Mode S is unnecessary, it may consult with the U.S., possibly through SICASP, and make a recommendation.

Issue number 8: Issuance of Mode S requirements prior to issuance of the Mode S Technical Standard Order is premature. This point was made by seven commenters before the December 16 comment deadline date for the Mode S NPRM. At that time, the FAA had not as yet issued a Mode S TSO. However, on February 5, 1986, the FAA issued the Mode S TSO, TSO-C112, "Air Traffic Control Radar Beacon System/Mode Select (ATCRBS/Mode S) Airborne Equipment."

ECONOMIC EVALUATION

The following is a summary of the regulatory evaluation associated with this rule. The complete evaluation is in the public docket for inspection.

This rule involves some costs and benefits. There are three aspects of the rule which may have potential economic impacts:

1. The requirement for use of automatic pressure altitude reporting equipment in Group II TCA's after December 1, 1987.
2. The basic Mode C and Mode S transponder and maintenance requirements.
3. The change to maintenance tests for the ATCRBS transponder.

Group II TCA Requirement

The proposal for altitude reporting equipment within Group II TCA's has an effective date of December 1, 1987. Current regulations require only a 4096 code transponder (ATCRBS) within Group II TCA's. The basic transponder does not have the automatic altitude reporting capability associated with Mode C, which is an add-on piece of avionics compatible with nearly all transponders currently in use. There has been a steady trend toward increased equipage in the general aviation fleet with both ATCRBS tranponders and Mode C capability over the past decade. FAA national data reveal that by 1984, about 80 percent of the general aviation (including the commuters and air taxies) was equipped with an ATCRBS transponder and that about one-half of these transponders had Mode C capability. In estimating the cost of this new requirement, the FAA assumed that only those aircraft which presently operate in Group II TCA's and are not equipped with Mode C would be affected. The FAA determined that the cost (discounted) of equipping the 2,368 aircraft that would be affected by this requirement would amount to $1.9 million. In addition, the incremental testing costs associated with Mode C are expected to amount to about $333,500 over the next five years. None of the major air carriers would be affected by this requirement.

There are safety and efficiency benefits associated with the proposal, but they are not quantifiable. Those benefits would result from improved aircraft control within Group II TCA's. Although there is no realistic method for allocating a portion of the overall NAS benefits ($16 billion) to the Mode C regulatory proposal, one can reasonably conclude that the likely benefits would far exceed the associated one-time costs of $1.9 million and recurring cost of $335,000 in view of the central role envisioned for Mode C in the overall NAS Plan.

Mode S Transponder Requirements

The regulatory cost of the Mode S proposal can be developed by estimating Mode S installations and multiplying this forecast by an estimate of the net cost of compliance.

Forecast of Installations

Installations of Mode S transponders are forecast to begin in 1988, with only 10 percent of new installations being Mode S that year, but increasing to 100 percent in 1992. Total transponder installations are estimated as the net annual increase in active aircraft in forecast years, plus 3 percent of the previous year's active aircraft. Using FAA forecasts for future years (FAA Aviation Forecast, February 1987), installations of Mode S transponders would exceed 6,000 in 1992 and average approximately 6,500 a year for the decade from 1991 to the year 2000.

Net Cost of Installation

The added cost per unit for a Mode S transponder, compared to projected transponder equipage in the absence of this regulation, is expected to be approximately $600, installed. This cost estimate assumes installation of a Mode S surveillance transponder with data link connectors, but not the cost of data link processing or display capability. Data link capability could be integrated into the transponder or added later. The price for a Mode S transponder will be about $1,000 more than for an ATCRBS Transponder for about 4 years to account for recovery of development costs.

Based on these assumptions, the regulatory cost of the Mode S proposal for the period 1988 thru 2000 is $21.2 million on a discounted cost basis.

Benefits of Mode S

Mode S is a major component of the NAS Plan. There are many benefits of Mode S, and all are associated with the benefits of the NAS Plan implementation. The benefits of the NAS Plan implementation have been estimated at almost $16 billion in cost savings through the year 2000, due to system operations and maintenance costs, as compared to the "1981 equivalent" systems. There is no reasonable way to allocate a portion of the overall NAS benefits to the Mode S regulatory proposal, but Mode S is considered necessary to successful implementation of the NAS Plan.

Transponder Maintenance Tests

There are additions to Appendix F of Part 43 which provide for tests appropriate for Mode S transponders. There is also an added power output test required for ATCRBS transponders. This test should not involve significant additional costs. The Mode S inspection costs are expected to be moderately higher. Assuming the cost of the Mode S biennial test will be moderately higher than today's tests, any offsetting benefits are in the same general category of general NAS benefits and cannot be specifically allocated to Mode S.

CONCLUSION

Estimated costs of the Mode C requirement in Group II TCA's are $1.9 million for equipment and approximately $333,500 over the next five years for testing. Estimated cost of the Mode S transponder requirement from the year 1988 through year 2000 is $21.2 million on a discounted cost basis. Additional costs of required periodic testing of the Mode transponder will not be significant. The benefits of the Mode C, Mode S, and associated testing requirements adopted in this rule are difficult to quantify, but all are essential components of the NAS Plan. Implementation of the Plan is estimated at almost $16 billion in cost savings through the year 2000. In addition, if one midair collision involving a medium size airliner is prevented by any of the requirements adopted, the additional benefit would be approximately $61,508,000 on a discounted cost basis (based on an accident involving 110 fatalities). Therefore, the FAA has concluded that the benefits of the rules adopted substantially exceed the regulatory costs of those rules.

For the reasons set forth in the above regulatory evaluation summary, the FAA has determined that the rule does not involve a major rule under Executive Order 12991. The Department of Transportation has determined that the rule is considered a significant rule under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). A copy of the Regulatory Evaluation prepared for this action is contained in the regulatory docket, and a copy may be obtained by contacting the person identified under the caption, "FOR FURTHER INFORMATION CONTACT."

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (RFA) was enacted by Congress in order to insure, among other things, that small entities are not disproportionately affected by Government regulations. The RFA requires agencies to review rules which may have a "significant impact on a substantial number of small entities." For purposes of RFA, small entities are considered to include small businesses, non-profit organizations, and municipalities but not private individuals. As discussed above under "Economic Evaluation," the FAA concludes that the number of small entities affected by this rule will not be substantial in relation to all aviation-related small entities. In addition, the impact on most such small entities will be substantially less than the threshold for significant impact under agency guidelines. Therefore, I certify that, under the criteria of the Regulatory Flexibility Act, this rule will not have a significant impact on a substantial number of small entities.

SUMMARY OF FAA ACTIONS

Consistent with FAA's plan to modernize the NAS, and the planned role of the Mode S surveillance system in the NAS, the FAA is taking or has taken the following actions:

1. *Issue a TSO for airborne Mode S Transponder.* Concurrently, TSO authorization to manufacture ATCRBS transponders will continue in effect. The intent of continuing the ATCRBS TSO is to allow continued manufacture of ATCRBS transponders for foreign sale and for installation in aircraft destined for foreign countries and to accommodate the DOD.

Issuance of the TSO's is not accomplished through rulemaking and, therefore, the Mode S TSO is not a regulatory portion of this rulemaking package. However, consistent with FAA practice, the proposed TSO for Mode S was made available for public comment. All issues generated by public comment were resolved and TSO-C112 was issued February 5, 1986.

2. *Amend the FAR.* The following changes to the FAR are adopted by this amendment:

FAR Part 43, Appendix F. ATC transponder test and inspection requirements apply to both ATCRBS and Mode S transponders. Test areas include radio reply frequencies, suppression, receiver sensitivity, radio frequency, and output power. Those tests applicable only to Mode S transponders include Mode S diversity transmission channel isolation, Mode S address, Mode S formats, Mode S all-call interrogations, ATCRBS-only all-call interrogations, and squitter. The reference to Section 91.177 is corrected to refer to Section 91.172. The existing requirement for recordkeeping will be retained.

FAR Part 91, Section 91.24(a). For operations not conducted under Parts 121, 127, or 135, ATC transponder equipment installed (or in fleet operations, equipment introduced into the fleet inventory) within specific time periods must meet the performance and environmental requirements of the TSO's specified in the rule. The requirement to meet the Mode S TSO after January 1, 1992, does not apply to—

(a) A transponder which met the requirements of the rule when originally installed, and which is removed from an aircraft for maintenance and then reinstalled on the aircraft from which it was removed.

(b) A transponder which meets the requirements of TSO C74b or TSO C74c and is temporarily installed on an aircraft when the permanent transponder is removed for maintenance.

(c) A transponder which met the requirements of the rule when originally installed in a fleet aircraft, which is removed from the aircraft for maintenance /repair, and which is then installed on either the aircraft from which it was removed or on another aircraft in the same fleet.

Section 91.24(b). All aircraft operated in the airspace areas below are required to have either a combination ATCRBS or a Mode S transponder and automatic pressure altitude reporting equipment. The new requirement applies as follows:

1. in Group I TCA's;
2. in Group II TCA's; and
3. in all controlled airspace of the 48 contiguous States and the District of Columbia, above 12,500 feet MSL, excluding the airspace at and below 2,500 feet AGL.

Automatic pressure altitude reporting (Mode C) equipment is required in Group II TCA's.

Exceptions to the rule are as follows:

1. Operations of helicopters in TCA's at or below 1,000 feet AGL under a letter of agreement.
2. Operations of gliders above 12,500 feet MSL but below the floor of positive control area.

No Group III TCA's exist or are planned.

An editorial change has been made to substitute the word "operating" for the word "operable" in Section 91.24(b). Substitution of the word "operating" for the word "operable" is made to reflect the requirement that transponders must be turned on.

Section 91.90(b)(2)(iii). Aircraft operating in Group II TCA's are required to be equipped with automatic pressure altitude reporting equipment effective December 1, 1987.

The following FAR sections are amended to make transponder requirements under those sections consistent with the amended transponder installation requirements of Part 91:

1. FAR Part 121, Section 121.345(c);
2. FAR Part 127, Section 127.123(b); and
3. FAR Part 135, Section 135.143(c).

ADOPTION OF THE AMENDMENTS

For the reasons set forth above, Parts 43, 91, 121, 127, and 135 of the Federal Aviation Regulations (14 CFR Parts 43, 91, 121, 127 and 135) are amended, effective April 6, 1987.

The authority citation for Part 127 is revised to read as follows:

Authority: 49 U.S.C. 1354(a), 1421, 1422, 1423, 1424, 1425, 1430; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983).

Amendment 127-43

Revision of General Operating and Flight Rules

Adopted: August 7, 1989 **Effective: August 18, 1990**

(Published in 54 FR 34284, August 18, 1989)

SUMMARY: This amendment reorganizes and realigns the general operating and flight rules to make them more understandable and easier to use. Also, several changes are made to provide more flexibility for certain operations. These changes result from comments received from the general public and aviation industry in response to a request for specific comments to help identify substantive areas needing review.

EFFECTIVE DATE: This amendment becomes effective on August 18, 1990, except that § 91.203(a)(2) becomes effective September 18, 1989, and remains numbered as § 91.27(a)(2) until August 18, 1990.

FOR FURTHER INFORMATION CONTACT: William T. Cook (202) 267-3840 or Edna French (202) 267-8150, Project Development Branch (AFS-850), General Aviation and Commercial Division, Office of Flight Standards, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, D.C. 20591.

SUPPLEMENTARY INFORMATION:

Background

On August 9, 1978, the Aircraft Owners and Pilots Association (AOPA) petitioned the Federal Aviation Administration (FAA) to revise Part 91 of the Federal Aviation Regulations (FAR) to make the regulations simpler and more comprehensible. In response to this petition, on January 11, 1979, the FAA issued an Advance Notice of Proposed Rulemaking (ANPRM) No. 79-2 (44 FR 4572; January 22, 1979) consisting of a verbatim publication of AOPA's proposal.

The FAA received 106 comments in response to the ANPRM. An overwhelming majority of the commenters supported the intent of the proposal to reorganize Part 91. However, there were numerous problem areas identified by the commenters relating to the proposed changes that were considered substantive.

On November 18, 1980, the FAA formed a Part 91 Working Group to analyze the AOPA proposal and comments received on the ANPRM. It was determined that certain technical and administrative problems existed and that it was not feasible to undertake a substantive revision of Part 91 at that time. Subsequently, AOPA withdrew its petition. However, review of AOPA's proposal to reorganize and renumber Part 91 revealed that many of the changes had merit and could be implemented. The FAA Part 91 Working Group concluded that the reorganization and renumbering of Part 91 would be the first step to improve the regulation and make it more understandable and easier to use. Consequently, the FAA published NPRM No. 79-2A (46 FR 45256; September 10, 1981), which proposed to reorganize and realign the general operating and flight rules to make them more understandable and easier to use. Other proposals were made to delete redundancies and obsolete compliance dates and to make other minor changes.

Notice No. 79-2A did not contain any substantive changes; however, it did inform the public that the FAA considered that notice to be the first step in a regulatory review of Part 91 consistent with the objective of Executive Order 12291. With this in mind, the FAA invited additional specific comments to help identify substantive areas to be reviewed and possibly included in subsequent proposals concerning Part 91. The notice further stated that the FAA would not take final action concerning the reorganization until substantive changes were proposed and the public had been given an opportunity to comment on those proposals.

The FAA published Notice No. 79-2B (46 FR 60461; December 10, 1981) to extend the comment period for Notice No. 79-2A by 120 days. That notice was issued in response to a petition from the National Business Aircraft Association to allow additional time for commenters to prepare substantive comments.

The FAA received 69 comments in response to Notice No. 79-2A. The majority of these comments favored the proposal and were discussed in Notice No. 79-2C (50 FR 11292; March 20, 1985).

Notice 79-2C proposed four substantive changes in addition to the numerous changes made to reorganize and clarify existing rules. Two of these changes were made in response to comments received from the public. These changes are as follows:

(1) Section 91.117—Allows reciprocating-powered aircraft to be operated at 200 knots in an airport traffic area;

(2) Section 91.135—Allows operators desiring authorizations to deviate from positive control area and route segment requirements to utilize a 48-hour oral notification system;

(3) Section 91.409—Allows operators of turbine-powered rotorcraft to use an alternate inspection program, such as an FAA-approved inspection program; and

(4) Sections 91.205, 91.509, and 91.511—Defines "shore" as it is used in these sections to exclude tidal flats.

Public Comments

Forty-seven comments were received in response to Notice No. 79-2C. A number of commenters recommended regulations that were not proposed in the notice. Because such comments discuss matters which the public has not had an opportunity to consider, they are beyond the scope of the notice and cannot be considered without further notice and public participation. Some of these comments concern proposals that will be considered by the FAA in future rulemaking and, therefore, could be published in a future notice.

There were two areas in particular where several proposals were received that are not within the scope of the notice. First, 11 comments specifically request that balloons be excepted from certain requirements now pertaining to aircraft in general. These comments seek substantive change to the existing regulations not proposed in the notice.

Second, a number of commenters propose substantive changes to the regulations with regard to rotorcraft. Although these comments are not within the scope of this rulemaking, they were considered in the Rotorcraft Regulatory Review Program, Notice No. 5.

Two commenters are opposed to changing masculine references to "airman" to read "he or she." One commenter states that this would keep the text shorter and speed up the reading of the text. The other commenter states that § 1.3(a)(3) already provides that "words importing the masculine gender include the feminine," and the better course would be to refer to the "person," or the "pilot." The FAA agrees with these commenters. Accordingly, references throughout Part 91 that use the words "he" or "she" have been changed to refer to the "person," the "pilot," the "crewmember," or the "Administrator."

One commenter writes that the use of "pilot in command" and "PIC" is inconsistent in the proposed rules. The FAA agrees with this commenter and, accordingly, has changed references to "PIC" in §§ 91.123(a) and 91.129(b) to "pilot in command" to make their use consistent throughout Part 91.

A commenter suggests that all references to distances expressed in miles should state whether they are statute or nautical miles. The FAA agrees that such references should be clear. Accordingly, references to distance expressed in miles in §§ 91.171(b)(4)(ii) and 91.207(e)(3) are changed by adding the word "nautical" to reflect that the distances are expressed in nautical miles since they reference ground-measured distance. References to visibilities in §§ 91.155(b), 91.167(b)(2)(ii), and 91.303(e) are changed by adding the word "statute" to reflect that visibilities are expressed in statute miles.

Several commenters state that the proposed wording for § 91.1 implies that operations of moored balloons, kites, unmanned rockets, and unmanned free balloons are governed by Part 103. This comment has merit and § 91.1 is revised by adding a specific reference to Part 101 after the phrase "unmanned free balloons" to make clear that moored balloons, kites, unmanned rockets, and unmanned free balloons operate under Part 101.

Another commenter requests clarification of the discussion of § 91.7 in Notice No. 79-2C, where the FAA states that there is no provision for the use of an approved Minimum Equipment List (MEL) in Part 91 operations, whereas § 91.213 permits the use of an approved MEL. The FAA points out that at the time Notice No. 79-2C was published, the effective date of current § 91.30 (proposed § 91.213) was stayed indefinitely (44 FR 62884; November 1, 1979). Amendment No. 91-192 (50 FR 51188; December 13, 1985) which took effect on March 13, 1986, terminated the stay.

Section 91.7(b), which was proposed without substantive change from existing § 91.29, provides that a flight should be discontinued when unairworthy mechanical or structural conditions occur. One commenter suggests that this be changed by deleting "mechanical or structural" and making it more general so as to provide for a possible unairworthy electrical system. This suggestion raises a valid point; however, the FAA has determined that the rule should be amended to explicitly reference mechanical, electrical, or structural conditions. Therefore, § 91.7(b) is amended accordingly.

As suggested by one commenter, § 91.21(a)(1) is amended by deleting reference to a "commercial operator." This revision conforms § 91.21(a)(1) with SFAR 38-2 and Part 125 which do not provide for a commercial operator's certificate and, instead, provide for the issuance of either an "air carrier operating certificate" or an "operating certificate."

One commenter states that consideration should be given to better defining "appropriately rated pilot" in § 91.109 and provide a definition. The FAA agrees that the phrase "appropriately rated pilot" should be defined better.

The preamble to Amendment No. 91-36 (32 FR 260; January 11, 1967) states that an "appropriately rated pilot" in § 91.21(b) requires a private pilot certificate with an airplane category rating, a multiengine class rating for a small multiengine land plane, and a type rating for a large airplane or a turbojet-powered airplane (large or small).

Accordingly § 91.109(b)(1) is amended to require that the safety pilot hold at least a private pilot certificate with category and class ratings appropriate to the aircraft being flown.

One commenter urges the FAA to reinsert the current rule regarding visual descent points (VDPs) (current § 91.116). VDPs are not an integral part of the approach procedure. An aircraft that is not equipped to identify a VDP has the same approach minima as a similar aircraft that is equipped to identify the VDP.

Mandatory use of VDPs is considered inappropriate for a number of reasons:

(1) VDPs that use Distance Measuring Equipment (DME) fixes may, because of displacement factors and/or fix errors, result in descent angles that are either too shallow or too steep for the approach.

(2) A mandatory VDP rule discourages the purchase and use of the very equipment necessary to identify the VDP. This is so because compliance can only be required of those aircraft that are equipped to identify the VDP.

For these reasons, the final rule, like the NPRM, does not include a mandatory VDP requirement.

Notice No. 79-2C proposed that § 91.175(a) read: "Unless otherwise authorized by ATC, when an instrument letdown to a civil airport is necessary, each person operating an aircraft, except a military aircraft of the United States, shall use a standard instrument approach procedure prescribed for the airport in Part 97 of this chapter." The lead-in clause is changed to read, "Unless otherwise authorized by the Administrator," because ATC does not have the authority to approve a person's non-compliance with this rule.

Several commenters raise objections to proposed § 91.203(a)(2), which would prevent an aircraft from operating outside of the United States under the temporary authority of the pink copy of the Aircraft Registration Application as provided in § 47.31(b). The commenters assert that the proposal is a substantive change and not a clarification of the present rule; and that the FAA should consider the economic impact on the industry, the consumers, and the historical precedence of past practices. These commenters suggest that the FAA withdraw the proposal and acknowledge the pink copy of the application as a temporary certificate of registration.

Another commenter is of the opinion that the FAA has not provided discussion, as required by Executive Order 12291, on the economic impacts that would result from the delay between application for an issuance or denial of the registration certificate, under the proposals, in the NPRM. The commenter maintains that future investment purchases and leases would also be adversely affected. Several commenters also question the regulatory consistency that the FAA claims as the basis for the change.

These comments were responded to in full in a Notice of Legal Opinion issued December 1988 (53 FR 50208; December 14, 1988). That Notice of Legal Opinion stated that the limitation of temporary authority to operate an aircraft without registration to domestic operations (as also provided in new

§ 91.203(a)(2)) reflects current U.S. law and practice. Concerning the economic impact of this ruling, the FAA in that Notice of Legal Opinion answered:

> The aviation community has always been able to transfer ownership and register their aircraft with minimal difficulty. In order to mitigate the potential hardship that could result from grounding an aircraft used in international operations, pending receipt of a registration certificate, the Registry will, upon request, telex a copy of the Certificate of Aircraft Registration to the individual whose name appears on the application as the registered owner of the aircraft. The telex copy is issued after confirmation of the information contained on an Aircraft Registration Application and determination of eligibility for registration. The telex, which reflects critical and verified information resulting from the evaluation by the Registry of an application for aircraft registration, may be used as a temporary Certificate of Aircraft Registration until the original certificate is forwarded for carriage in the aircraft.
>
> This telex certificate will assist owners who submit an application for aircraft registration and who wish to operate the aircraft as soon as possible in international operations. Since the telex, by its terms, is a form of registration certificate, the aircraft may be operated in international air navigation consistent with Article 29 of the Convention [Convention on International Civil Aviation (61 Stat. 1180; T.I.A.S. 1591; 15 U.N.T.S. 295)]. The Registry will telex this copy within a matter of days—often within 48 hours—to be kept in the aircraft until the original Certificate of Aircraft Registration (AC Form 8050-3) is forwarded to the registered owner.

Accordingly, the FAA has determined that the rule should be amended as proposed, and consistent with the Chief Counsel's legal opinion, to provide explicitly that operations of aircraft outside the United States for which an application for registration has been submitted but certificate of registration has not been issued are not authorized under the Federal Aviation Regulations.

Several judicial decisions have defined the "shore" as including tidal flats. In some parts of the United States, these tidal flats can extend for several miles and, because of the extreme tides prevalent in these areas, the land may be submerged under as much as 25 to 35 feet of water during periods of high tide. The intent of the rule is to require operators carrying passengers for hire over these areas to equip their aircraft with the necessary flotation gear and pyrotechnic devices. Therefore, "shore," when it is used in §§ 91.205, 91.509, and 91.511, is defined to exclude land areas, such as tidal flats, which are intermittently under water.

An incorrect reference to "§ 91.169" was used in proposed § 91.409(e), which has been corrected to "§ 91.409" in the final rule.

It was pointed out by several commenters that the word "stop" in § 91.605(c)(2) was inadvertently included in the proposal and should be deleted. The commenters are correct, and the final rule has been amended accordingly. Also, the word "if" following the word "distance" in that same sentence has been corrected to read "is."

In addition to the specific changes discussed above, minor changes have been made in the wording of the regulations proposed in Notice No. 72-2C. In § 91.3(b), the word "in-flight" has been inserted to clarify that the deviation authority of § 91.3 applies only to in-flight emergencies which affect the safe completion of the flight.

The original intent of § 91.3 was to allow the pilot in command to deviate from certain regulations in the event of an in-flight emergency. Over time, regulations involving non-flight items were inserted into Subparts A and B, while flight-related regulations were inserted in other Subparts. Therefore, the word "in-flight" is being added to return the language to its original intent.

Other changes are nonsubstantive in nature. Except for such minor revisions, those parts of the proposal for which there were no comments are adopted as proposed. Finally, all other sections of Part 91 remain unchanged except for renumbering (see the cross-reference lists below).

Several amendments to Part 91 adopted since Notice No. 79-2C were published are reflected in the final rule. Where reference to other sections of this part were set forth in an amendment, the references have been changed to reflect the appropriate sections as used in the final rule. Those required changes published in the Federal Register prior to June 19, 1989, are discussed below.

Amendment No. 91-188, (50 FR 15380; April 17, 1985) amended current § 91.11, which governs the use of alcohol or drugs by any crewmember performing duty during the operation of an aircraft. This amendment took effect on June 17, 1985. Subsequently, Amendment No. 91-194 (51 FR 1229; January 9, 1986) amended § 91.11(c) to impose a requirement for a crewmember to furnish the results of any test that indicates percentage by weight of alcohol in a crewmember's blood. This amendment took effect on April 9, 1986. Proposed § 91.17 has been revised accordingly.

Amendment No. 91-189 (50 FR 31588; August 5, 1985) removed references to "expect approach clearance time" in § 91.127. This amendment took effect on September 4, 1985. Section 91.185 reflects this amendment.

Amendment No. 91-190 (50 FR 45602; November 1, 1985) added a new paragraph (c) to current § 91.24. This amendment took effect on December 2, 1985. This new paragraph required all aircraft equipped with an operable radar beacon transponder be turned on while airborne in controlled airspace. Subsequently, § 91.24(c) was amended by Amendment No. 91-203 (53 FR 23374; June 21, 1988). Proposed § 91.215(c) has been redesignated as paragraph (d) and the changes brought about by Amendment Nos. 91-190 and 91-203 have been incorporated into revised § 91.215(c).

Amendment No. 91-191 (50 FR 46877; November 13, 1985) amended current § 91.14 (proposed § 91.107) by revising the title and the section to include reference to shoulder harnesses. This amendment took effect on December 12, 1985. Section 91.107 has been revised accordingly. Amendment No. 91-191 also added a new paragraph to current § 91.33 which requires a shoulder harness for specified seats in normal, utility, and acrobatic category airplanes with a seating configuration, excluding pilot seats, of nine or less, manufactured after December 12, 1986. This paragraph appears as § 91.205(b)(15).

Amendment No. 91-192 (50 FR 51189; December 13, 1985) terminated the suspension of Amendment No. 91-157 (44 FR 43714; July 26, 1979) staying the effective date of current § 91.30. This amendment took effect on March 31, 1986. Subsequently, Amendment No. 206 (53 FR 50195; December 13, 1988) amended § 91.30. Section 91.213 reflects these amendments.

Amendment No. 91-193 (50 FR 51193; December 13, 1985) changed the FAA's description of North Atlantic (NAT) Minimum Navigation Performance Specifications (MNPS) airspace to coincide with the International Civil Aviation Organization's (ICAO's) description of the NAT MNPS airspace. This has been reflected accordingly in Section 1 of Appendix C of this final rule.

Amendment No. 91-195 (51 FR 31098; September 2, 1986) corrects the reference to the Department of Defense office in current § 91.102 restricting the flight of aircraft near space flight operations. This amendment took effect on September 15, 1986. Section 91.143 reflects this amendment.

Amendment No. 91-196 (51 FR 40692; November 7, 1986) upgraded rotorcraft certification and operational requirements, thus effecting amendments to several FARs. This amendment took effect on January 6, 1987. Current § 91.2 was amended to afford small helicopter operators the opportunity to apply for Category II instrument approach authorization. Proposed § 91.193 has been revised accordingly. Current § 91.23 was amended to reduce the IFR reserve fuel requirement for helicopters from 45 to 30 minutes. Proposed § 91.167 has been amended to reflect this change. Current § 91.116 (proposed § 91.175) was amended to establish a separate takeoff minimum for helicopters under IFR, of one-half mile visibility. Current § 91.171 was amended to include helicopters in the altimeter system and altitude reporting equipment tests and inspection requirements. Proposed § 91.411 has been amended to reflect this change. In order to enable rotorcraft to perform Category II operations, Amendment No. 91-196 also amended Appendix A in Part 91 by removing the word "airplane" and replacing it with the word "aircraft" wherever it appears.

Amendment No. 91-197 (52 FR 1836; January 15, 1987) revises the authority citation for Part 91 and adds a new paragraph to current § 91.213 which states that a commuter category airplane must have a pilot designated as second in command, unless the airplane has a passenger seating configuration, excluding pilot seats, of nine or less seats, and is type certificated for operations with one pilot. This amendment took effect on February 17, 1987. This rule now appears as § 91.531(a)(3).

Amendment No. 91-198, (52 FR 3391; February 3, 1987) amended current § 91.24(a) and (b) on ATC transponder and altitude reporting equipment and use. This amendment took effect on April 6, 1987. Subsequently, Amendment No. 91-203 (53 FR 23374; June 21, 1988) amended § 91.24(b) and (c) and Amendment No. 91-210 (54 FR 25682; June 16, 1989) revised § 91.24(a).

Proposed § 91.215 has been revised accordingly. Amendment No. 91-198 also revised paragraph (b)(2)(iii) of current § 91.90 to allow operations conducted prior to December 1, 1987, in Group II TCAs, to be exempt from the new equipment requirements of current § 91.24. Amendment No. 91-203 (53 FR 23374; June 21, 1988) subsequently revised § 91.90, effective July 21, 1988. Amendment No. 91-205 (53 FR 40323; October 14, 1988) further revised § 91.90 in its entirety effective January 12, 1989. Amendment No. 90-209 (54 FR 24883; June 9, 1989) amended § 91.90 by delaying the effective date of the section for helicopter operations. The rule, covering all amendments to date, appears in this revision as § 91.131.

Amendment No. 91-199, (52 FR 9636; March 25, 1987) amended current § 91.35 by renumbering the paragraphs and adding a new paragraph that requires any operator who has installed approved flight recorders and approved cockpit voice recorders to keep the recorded information for at least 60 days, or longer, if requested by the Administrator or the National Transportation Safety Board. This amendment took effect on May 26, 1987. The amended rule now appears as § 91.609.

Amendment No. 91-200, (52 FR 17277; May 6, 1987) amended current § 91.173 by requiring each registered aircraft owner or operator to keep "preventive maintenance" records as well as maintenance, alteration, and records of the 100-hour annual, progressive, and other required or approved inspections, as appropriate, for each engine, propeller, rotor, and appliance of an aircraft. This amendment took effect on June 5, 1987. This amended rule now appears as § 91.417(a)(1).

Amendment No. 91-201, (52 FR 20028; May 26, 1987) adds the reference to Part 129 to the exception in current § 91.161(b) from the requirements of §§ 91.165, 91.169, 91.171, 91.173, and 91.174 for aircraft maintained in accordance with a continuous maintenance program as provided for in Part 129. The amendment took effect on August 25, 1987. This amended rule now appears as § 91.401(b).

Amendment No. 91-202, (52 FR 34102; September 9, 1987 and 52 FR 35234; September 18, 1987) amended current § 91.27 on civil aircraft certification requirements by adding a new paragraph (c) to require that a copy of the form which authorized the alteration of an aircraft with fuel tanks within the passenger or a baggage compartment be kept on board the modified aircraft. This new rule now appears as § 91.203(c). Current § 91.173 on maintenance records was revised by requiring that such records be made available to the Administrator or an authorized representative of the National Transportation Safety Board and when such a fuel tank is installed as set forth in § 91.35 as amended pursuant to Part 43, a copy of the FAA Form 337 be kept on board the modified aircraft. This new rule appears as § 91.417(b) and (c). This amendment took effect on December 8, 1987.

Amendment No. 91-203, (53 FR 23374; June 21, 1988, 53 FR 25050; July 1, 1988, and 53 FR 26592; July 14, 1988) amended or revised § 91.24 (ATC transponder and altitude reporting equipment and use), 91.88 (Airport radar service areas), and 91.90 (Terminal control areas), and by adding a new Appendix D entitled "Airports/Locations Where the Transponder Requirements of § 91.24(b)(5)(ii) Apply," regarding use of transponders with automatic altitude reporting. This amendment took effect on July 21, 1988. Amendment No. 91-205 (53 FR 40323; October 14, 1988) revised § 91.90 in its entirety effective January 12, 1989. Amendment No. 91-209 (54 FR 24883; June 9, 1989) amended § 91.90 by delaying the effective date of the section for helicopter operations. These rules now appear in this revision as §§ 91.215, 91.130, 91.131, and new Appendix D to Part 91, respectively.

Amendment No. 91-204, (53 FR 26145; July 11, 1988) amended current § 91.35 on flight recorders and cockpit voice recorders to require digital flight recorders and voice recorders to be installed on selected aircraft operated in general aviation. The specifications for such recorders are set forth in a new Appendix E to Part 91 for airplanes and in a new Appendix F to Part 91 for helicopters. The amendment is reflected as § 91.609(b), (c), (d), and (e), and new Appendixes E and F to Part 91. This amendment becomes effective on October 11, 1991.

Amendment No. 91-205 (53 FR 40323; October 14, 1988) revised the classification and pilot and equipment requirements for conducting operations in terminal control areas (TCA's) by amending § 91.90 to establish a single-class TCA; require the pilot-in-command of a civil aircraft to hold at least a private pilot certificate, except for a student pilot who has received certain documented training; and, to eliminate the helicopter exception from the minimum equipment requirement. The amendment was effective on January 12, 1989. Subsequently, Amendment No. 91-209 (54 FR 24883; June 9, 1989) amended § 91.90(c)(1) by delaying the application of the section for helicopter operations for one year. Revised § 91.131 covers these amendments.

Amendment No. 91-206 (53 FR 50195; December 13, 1988) amended § 91.30 to permit rotorcraft, nonturbine-powered airplanes, gliders, and lighter-than-air aircraft, for which an approved Master Minimum Equipment List has not been developed, to be operated with inoperative instruments and equipment not essential for the safe operation of the aircraft. The amendment also permits general aviation operators of small rotorcraft, nonturbine-powered small airplanes, gliders, and lighter-than-air aircraft for which a Master Minimum Equipment List has been developed, the option of operating under the minimum equipment list concept, or under other conditions as set forth in the amendment. Amendment No. 91-206 also amended § 91.165 to require that any inoperative instrument or item of equipment permitted to be inoperative under the new amended § 91.30 to be repaired, replaced, removed, or inspected at the next required inspection for the aircraft. These amendments became effective on December 13, 1988, and appear as §§ 91.213 and 91.405 of this revision to Part 91.

Amendment No. 91-207 (54 FR 265; January 4, 1989) amended §§ 91.1 and 91.61 to extend the controlled airspace and the applicability of certain air traffic rules to coincide with presidential action to extend the territorial sea of the United States for international purposes, from 3 to 12 nautical miles from the U.S. coast. This amendment became effective on December 27, 1988. These amended rules now appear as §§ 91.1 and 91.101.

Amendment No. 91-208 (54 FR 950; January 10, 1989) added a new § 91.26 to require that any traffic alert and collision avoidance system installed in a U.S. registered civil aircraft must be approved by the Administrator, and if installed, must be on and operating during the aircraft's operation. The amendment became effective on February 9, 1989. The amendment appears herein as §§ 91.221.

Amendment No. 91-209 (54 FR 24883; June 9, 1989) delays the effective date of certain navigational equipment requirements of helicopter operations in a Terminal Control Area (TCA) by the amendment of § 91.90(c)(1). The amendment became effective on June 6, 1989. Section 91.131 covers this amendment.

Amendment No. 91-210 (54 FR 25682; June 16, 1989), effective June 16, 1989, amended § 91.24(a) to allow certain aircraft operators to install non-Mode S transponders in aircraft until July 1, 1992, instead of until January 1, 1992, provided that such transponders are manufactured prior to January 1, 1991, instead of prior to January 1, 1990. This amendment appears as § 91.215(a).

References to Part 91 found in other sections of the Federal Aviation Regulations have also been amended to incorporate the revised numbering of Part 91. These miscellaneous amendments are found at the end of the amendments to Part 91.

Furthermore, §§ 91.615 through 91.645 as identified in Notice No. 79-2C (50 FR 11292; March 20, 1985) now appear in this final rule as §§ 91.503 through 91.533.

Regulatory Evaluation

FAA analysis indicates that these amendments will not have a significant impact on the public or any level of government on an annual basis. The final rule includes changes to clarify the existing rules by simplifying the language, deleting obsolete requirements, consolidating similar regulations, updating equipment requirements to reflect the state-of-the-art, and relaxing certain operating and flight rule requirements.

Benefits

Section 91.117 allows reciprocating-powered aircraft to be operated in an airport traffic area at indicated airspeeds not greater than 200 knots. The FAA is unable to determine operator time and fuel cost savings because they will largely depend on the type of aircraft involved, desired speed, and weather and traffic conditions. The aggregate annual cost savings to these operators will not be significant because: 1) the normal cruise speed for most single engine reciprocating-powered aircraft does not exceed 156 knots, and 2) pilots of most multiengine reciprocating-powered aircraft, while operating within an airport traffic area, will not exceed the normal aircraft cruising speed which is not significantly greater than 156 knots in many of these aircraft.

Section 91.135 provides for a 2-day advance oral notification for submitting requests for authorizations to deviate from positive control area and route segment requirements. The old rule required a 4-day advance written notification of the proposed operation to ATC. A request for an authorization to deviate from these requirements is an infrequent occurrence. Consequently, the new rule will have minor benefits in terms of cost savings.

Sections 91.205, 91.509, and 91.511 clarify the definition of "shore" as that area of land adjacent to the water which is above the high water mark, thereby excluding tidal flats. From a safety standpoint, a tidal area covered with water is not as safe an emergency landing place as a dry shoreline. The main benefit is improved survivability from accidents in areas where for-hire operators may not be in compliance with the intent of the present rule. There is insufficient information in accident records to be able to estimate how many deaths could have been avoided through the use of life jackets and pyrotechnic signaling devices in these instances.

Costs

Any cost associated with defining "shore" in § 91.205 as the high water line is expected to be negligible. The only parties potentially affected are small for-hire operators who do not comply with the obvious intention of the rule as presently worded. The FAA believes these operators are very few (probably less than 20 operators) in number. Such operators are likely to be traversing tidal flats in areas like Alaska. If such operators do not comply with the rule as written now, then the cost of compliance would be a maximum of about $105 per year per aircraft. This assumes a $50 cost for an approved flotation device per seat and a flotation device useful life of 5 years ($10 per passenger seat per year), 10 seats per aircraft for these specific operators, plus $5 per year per aircraft for a pyrotechnic signaling device.

Section 91.409 allows operators of turbine-powered rotorcraft to use alternate inspection programs such as inspections under an FAA-approved continuous airworthiness maintenance program. The operators may now schedule inspections in a manner that allows the highest level of utilization of their rotorcraft.

The FAA estimates that in 1984 there were approximately 3,000 active turbine-powered rotorcraft in non-air taxi use. The FAA assumes that about one-half of the operators of these aircraft would use the new inspection options.

The value of using these options is difficult to estimate. At a minimum, the major effect of this proposed rule would be one additional day per year of rotorcraft utility. The usefulness of this can be set at least at the cost of capital for 1 day. Using an average aircraft value of $300,000 and a use of 250 days per year, the cost of capital can be estimated at $180 per day ($300,000 at 15 percent interest divided by 250 days). Thus, the minimum benefit is approximately $0.27 million per year (half the fleet, 1500 turbine-powered rotorcraft times $180). As the fleet grows, the value of this benefit also increases.

Because of the reorganization and resulting renumbering of provisions, persons who regularly refer to existing Part 91 must familiarize themselves with the new structure. It is also recognized that many non-regulatory materials containing references to present Part 91 sections may have to be modified. To assist in reference to the new provisions, a redesignation table, similar to the cross-reference table published herein, will be included in subsequent editions of the Code of Federal Regulations. The FAA believes that any short-term costs associated with transition to the reorganized Part 91 will be outweighed by the benefits inherent in a more logically organized set of regulations.

Trade Impact

The FAA has determined that this regulation will have no impact on international trade.

Regulatory Flexibility Determination

The Regulatory Flexibility Act (RFA) of 1980 was enacted by Congress in order to insure, among other things, that small entities are not disproportionately affected by Government regulations. The RFA requires agencies to review rules which may have a "significant economic impact on a substantial number of small entities." As discussed above, the regulatory evaluation for Part 91 indicates that there are no negative or significant economic impacts associated with the proposed rule.

All but four of the changes to Part 91 are editorial or clarifying changes. Three of the four changes result only in minimal benefits being applied. The other is a change to § 91.205 which, while it is basically clarifying, may involve some minimal cost and benefit. Any economic impact would be minor— approximately $100 per aircraft per year, and would affect only a few small for-hire operators

in Alaska who do not comply with the intent of the rule as presently worded. Thus, the change could not be construed to cause "significant economic impact on a substantial number" of small entities within the meaning of the RFA. Therefore, this rule will not have a significant economic impact on a substantial number of small entities.

Conclusion

The FAA has determined that this document is not considered major under Executive Order 12291 or significant under Department of Transportation Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). It causes only four minor changes, three of which will provide benefits with no additional costs to the aviation public. The fourth will impose negligible costs which are substantially outweighed by the benefits provided. Other amendments provide general benefits by deleting obsolete requirements, relaxing certain operating and flight rule requirements, and updating and clarifying the text. Under the provisions of Executive Order 12291, the amendments in this final rule will not have a major economic effect on consumers; industries; Federal, State, or local government agencies; or geographic regions. There will be no significant effects on competition, employment, investment, productivity, innovations, or the ability of U.S.-based enterprises to compete with foreign-based enterprises in domestic or import markets. It is certified that under the criteria of the Regulatory Flexibility Act this final rule will not have a significant economic impact on a substantial number of small entities. A copy of the full economic evaluation is filed in the public docket and may be obtained by contacting the person listed in the "FOR FURTHER INFORMATION CONTACT" paragraph of this document.

CROSS REFERENCE

To identify where present regulations are relocated in the new rule, the following cross-reference lists are provided:

Cross Reference Table

Old Section	*New Section*	*Old Section*	*New Section*
91.1	91.1 and 91.703	91.30	91.213
91.2	91.193	91.31	91.9
91.3	91.3	91.32	91.211
91.4	91.5	91.33	91.205
91.5	91.103	91.34	91.191
91.6	91.189	91.35	91.609
91.7	91.105	91.36	91.217
91.8	91.11	91.37	91.605
91.9	91.13	91.38	91.323
91.10	91.13	91.39	91.313
91.11	91.17	91.40	91.315
91.12	91.19	91.41	91.317
91.13	91.15	91.42	91.319
91.14	91.107	91.43	91.711
91.15	91.307	91.45	91.611
91.17	91.309	91.47	91.607
91.18	91.311	91.49	91.603
91.19	91.21	91.50	Deleted
91.20	91.705	91.51	91.219
91.21	91.109	91.52	91.207
91.22	91.151	91.53	Deleted
91.23	91.167	91.54	91.23
91.24	91.215	91.55	91.817
91.25	91.171	91.56	91.815
91.26	91.221	91.57	91.25
91.27	91.203	91.58	91.613
91.28	91.715	91.59	91.321
91.29	91.7	91.61	91.101

Old Section	*New Section*
91.63	91.903
91.65	91.111 and 91.123
91.67	91.113
91.69	91.115
91.70	91.117
91.71	91.303
91.73	91.209
91.75	91.123
91.77	91.125
91.79	91.119
91.81	91.121
91.83	91.153 and 91.169
91.84	91.707
91.85	91.127
91.87	91.129
91.88	91.130
91.89	91.127
91.90	91.131
91.91	91.137
91.93	91.305
91.95	91.133
91.97	91.135
91.100	91.139
91.101	91.709
91.102	91.143
91.103	91.713
91.104	91.141
91.105	91.155
91.107	91.157
91.109	91.159
91.115	91.173
91.116	91.175
91.117	Deleted
91.119	91.177
91.121	91.179
91.123	91.181
91.125	91.183
91.127	91.185
91.129	91.187
91.161	91.401
91.163	91.403
91.165	91.405

Old Section	*New Section*
91.167	91.407
91.169	91.409
91.170	91.415
91.171	91.411
91.172	91.413
91.173	91.417
91.174	91.419
91.175	91.421
91.181	91.501
91.183	91.503
91.185	91.505
91.187	91.507
91.189	91.509
91.191	91.511
91.193	91.513
91.195	91.515
91.197	91.517
91.199	91.519
91.200	91.521
91.201	91.523
91.203	91.525
91.205	Deleted
91.207	Deleted
91.209	91.527
91.211	91.529
91.213	91.531
91.215	91.533
91.301	91.801
91.302	91.803
91.303	91.805
91.305	91.807
91.306	91.809
91.307	91.811
91.308	91.813
91.309	91.819
91.311	91.821
Appendix A	Appendix A
Appendix B	Appendix B
Appendix C	Appendix C
Appendix D	Appendix D
Appendix E	Appendix E
Appendix F	Appendix F

Cross Reference Table

New Section	*Old Section*
91.1	91.1
91.3	91.3
91.5	91.4
91.7	91.29
91.9	91.31
91.11	91.8
91.13	91.9 and 91.10
91.15	91.13
91.17	91.11
91.19	91.12
91.21	91.19
91.23	91.54
91.25	91.57

New Section	*Old Section*
91.101	91.61
91.103	91.5
91.105	91.7
91.107	91.14
91.109	91.21
91.111	91.65
91.113	91.67
91.115	91.69
91.117	91.70
91.119	91.79
91.121	91.81
91.123	91.75 and 91.65
91.125	91.77

Cross Reference Table—Continued

New Section	*Old Section*
91.127	91.85 and 91.89
91.129	91.87
91.130	91.88
91.131	91.90
91.133	91.95
91.135	91.97
91.137	91.91
91.139	91.100
91.141	91.104
91.143	91.102
91.151	91.22
91.153	91.83
91.155	91.105
91.157	91.107
91.159	91.109
91.167	91.23
91.169	91.83
91.171	91.25
91.173	91.115
91.175	91.116
91.177	91.119
91.179	91.121
91.181	91.123
91.183	91.125
91.185	91.127
91.187	91.129
91.189	91.6
91.191	91.34
91.193	91.2
91.201	New
91.203	91.27
91.205	91.33
91.207	91.52
91.209	91.73
91.211	91.32
91.213	91.30
91.215	91.24
91.217	91.36
91.219	91.51
91.221	91.26
91.301	New
91.303	91.71
91.305	91.93
91.307	91.15
91.309	91.17
91.311	91.18
91.313	91.39
91.315	91.40
91.317	91.41
91.319	91.42
91.321	91.59
91.323	91.38
91.401	91.161
91.403	91.163
91.405	91.165
91.407	91.167
91.409	91.169
91.411	91.171
91.413	91.172
91.415	91.170
91.417	91.173
91.419	91.174
91.421	91.175
91.501	91.181
91.503	91.183
91.505	91.185
91.507	91.187
91.509	91.189
91.511	91.191
91.513	91.193
91.515	91.195
91.517	91.197
91.519	91.199
91.521	91.200
91.523	91.201
91.525	91.203
91.527	91.209
91.529	91.211
91.531	91.213
91.533	91.215
91.601	New
91.603	91.49
91.605	91.37
91.607	91.47
91.609	91.35
91.611	91.45
91.613	91.58
91.701	New
91.703	91.1
91.705	91.20
91.707	91.84
91.709	91.101
91.711	91.43
91.713	91.103
91.715	91.28
91.801	91.301
91.803	91.302
91.805	91.303
91.807	91.305
91.809	91.306
91.811	91.307
91.813	91.308
91.815	91.56
91.817	91.55
91.819	91.309
91.821	91.311
91.901	New
91.903	91.63
91.905	New
Appendix A	Appendix A
Appendix B	Appendix B
Appendix C	Appendix C
Appendix D	Appendix D
Appendix E	Appendix E
Appendix F	Appendix F

Newly Established Rules

91.201	91.701
91.301	91.901
91.601	91.905

THE RULE

For the reasons set forth above, Part 91 of the Federal Aviation Regulations (14 CFR Part 91) is revised and Parts 1, 21, 23, 25, 27, 31, 33, 35, 36, 43, 45, 47, 61, 63, 65, 71, 93, 99, 103, 121, 125, 127, 133, 135, 137, and 141 of the Federal Aviation Regulations (14 CFR Parts 1, 21, 23, 25, 27, 31, 33, 35, 36, 43, 45, 47, 61, 63, 65, 71, 93, 99, 103, 121, 125, 127, 133, 135, 137, and 141) are amended effective August 18, 1990.

The authority citation for Part 127 continues to read as follows:

Authority: 49 U.S.C. 1354(a), 1421, 1422, 1423, 1424, 1425, 1430; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983).

Part 127—Certification and Operations of Scheduled Air Carriers with Helicopters

Subpart A—General

§ 127.1 Applicability.

(a) This part prescribes rules governing each air carrier holding a certificate of public convenience and necessity issued by the Civil Aeronautics Board when that air carrier engages in scheduled interstate air transportation using helicopters within the 48 contiguous States and the District of Columbia.

(b) This part does not apply to operations conducted under the provisions of [§ 91.321.]

§ 127.3 Operating rules.

Each air carrier shall:

(a) Comply with Part 91 of this chapter unless otherwise specified in this part; and

(b) Conduct charter flights or other special service operations, under the rules prescribed in § 121.5 of this chapter in place of the rules of this part.

§ 127.5 Operation of airplanes having a maximum passenger seating configuration of 30 seats or less and a maximum payload capacity of 7,500 pounds or less.

No person may conduct operations with an airplane having a maximum passenger seating configuration, excluding any pilot seat, of 30 seats or less and a maximum payload capacity of 7,500 pounds or less, unless those operations are conducted under Part 135 of this chapter, except §§ 135.5, 135.17, 135.27, 135.29, 135.31, 135.35, 135.37, and 135.39, and appropriate operations specifications. However, the holder of an air carrier operating certificate issued under this part may maintain its airplanes operated under Part 135 of this chapter under a continuous airworthiness maintenance program that meets Subpart I of this part and operations specifications issued to it under this part. Operations specifications issued under this section contain the operating limitations and requirements that the Administrator finds necessary.

Subpart B—Certification: Operations Specifications

§ 127.11 Certificate and operations specifications required.

No air carrier may operate a helicopter in operations to which this part applies without, or in violation of, an air carrier operating certificate and separate appropriate operations specifications issued under this part.

§ 127.13 Contents of certificate and operations specifications.

(a) Each air carrier operating certificate contains the points between which, and the routes over which, the air carrier may operate.

(b) An air carrier's operations specifications contain the following:

(1) The kinds of operations authorized.

(2) A current list of all helicopters authorized for use.

(3) En route authorizations.

(4) En route limitations.

(5) Heliport authorizations.

(6) Heliport limitations.

(7) Time limitations, or standards for determining time limitations, for overhauls, parts retirement, inspections, replacements, and checks of airframes, engines, rotors, and appliances.

(8) Procedures for control of weight and balance of helicopters.

(9) Pages of the air carrier's operations manual that have been specifically designated and approved by the Administrator.

(10) Any other item that the Administrator determines is necessary to cover a particular situation.

§ 127.17 Issue of certificates.

(a) An applicant is entitled to an air carrier operating certificate if—

(1) The applicant holds a certificate of public convenience and necessity issued by the Civil Aeronautics Board; and

(2) The Administrator, after investigation, finds that the applicant is properly and adequately equipped and able to conduct a safe operation under this part and operations specifications provided for in this part.

(b) Whenever, after investigation, the Administrator determines that the general standards of safety for air carrier operations require or allow a deviation from any requirement of this part (except § 127.73) for a particular operation or class of operations, he issues operations specifications prescribing appropriate requirements that deviate from the requirements of this part.

§ 127.19 Availability of certificate.

Each air carrier shall make its operating certificate available for inspection by the Administrator, or an authorized representative of the National Transportation Safety Board, at its principal operations base.

§ 127.21 Duration of certificate.

(a) An air carrier operating certificate is effective until termination of the economic authority issued by the Civil Aeronautics Board to the air carrier, or until it is surrendered or the Administrator suspends, revokes, or otherwise terminates it.

(b) If the Administrator suspends or revokes an air carrier operating certificate, the holder of that certificate shall return it to the Administrator.

§ 127.22 Carriage of narcotic drugs, marihuana, and depressant or stimulant drugs or substances.

If the holder of a certificate issued under this part permits any aircraft owned or leased by that holder to be engaged in any operation that the certificate holder knows to be in violation of [§ 91.19(a)] of this chapter, that operation is a basis for suspending or revoking the certificate.

§ 127.23 Use of operations specifications.

(a) Each air carrier shall keep each of its employees informed of the provisions of its operations specifications that apply to the employee's duties and responsibilities.

(b) Each air carrier shall maintain a complete and separate set of its operations specifications. In addition, each air carrier shall insert pertinent provisions of its operations specifications in its air carrier manual in such a manner that they retain their identity as operations specifications.

§ 127.25 Amendment of certificate.

(a) After notice and opportunity of hearing to the air carrier concerned, the Administrator may amend an air carrier operating certificate if the Administrator finds that the amendment is reasonably required in the interests of safety.

(b) Upon application by an air carrier, the FAA District Office charged with the overall inspection of the certificate holder's operations amends an air carrier operating certificate if it finds that general standards of safety allow the amendment.

§ 127.27 Amendment of operations specifications.

(a) The FAA District Office charged with the overall inspection of the certificate holder's operations may amend any operations specifications issued under this part, except those pertaining to heliport and route authorizations—

(1) Upon application by the air carrier, if the District Office determines that safety in air transportation and the public interest allows the amendment; or

(2) If the District Office determines that safety in air transportation and the public interest requires the amendment.

(b) In the case of an amendment under paragraph (a)(2) of this section, the District Office notifies the air carrier, in writing, of the proposed amendment, fixing a reasonable period (but not less than seven days) within which the air carrier may submit written information, views, and arguments on the

amendment. After considering all relevant material presented, the Administrator notifies the air carrier of any amendment adopted, or rescinds the notice. [The amendment becomes effective not less than 30 days after the air carrier receives notice of it, unless the air carrier petitions the Director, Flight Standards Service, to reconsider the amendment, in which case its effective date is stayed pending a decision by the Director.] If the [District Office] finds that there is an emergency requiring immediate action with respect to safety in air transportation, that makes the procedure in this paragraph impracticable or contrary to the public interest, [it] may issue an amendment, effective without stay, on the date the air carrier receives notice of it. In such a case, the [District Office] incorporates the finding, and a brief statement of the reasons for it, in the notice of the amended operations specifications to be adopted.

[(c) An applicant must file its application for an amendment of operations specifications with the District Office at least 15 days before the date that it proposes for the amendment to become effective, unless a shorter filing period is allowed by that office.]

(d) Within 30 days after receiving from the District Office a notice of refusal to approve an air carrier's application for amendment, the air carrier may petition the [Director, Flight Standards Office] to reconsider the refusal to amend.

§ 127.29 Inspection authority.

Each air carrier shall allow the Administrator to make any inspections or examinations that he considers necessary to determine the air carrier's compliance with the Federal Aviation Act of 1958, the Federal Aviation Regulations, and its operating certificate and operations specifications.

§ 127.31 Change of address.

Each air carrier shall notify the FAA Air Carrier District Office charged with the overall inspection of its operations, in writing, at least 30 days in advance, of any change in the address of its principal business office, its principal operations base, or its principal maintenance base.

Subpart C—Requirements for Services and Facilities

§ 127.41 Route requirements.

(a) Each air carrier seeking a route approval must show that—

(1) It is able to conduct scheduled operations between heliports over that route or route segment; and

(2) The facilities and services available are adequate for the kind of operation proposed.

(b) Paragraph (a) of this section does not require actual flight over a route or route segment if the air carrier shows that the flight is not essential to safety.

§ 127.43 Route width.

The Administrator designates the width of routes or route segments submitted to him for approval, consistent with—

(a) Terrain;

(b) Available navigation aids;

(c) Air traffic density; and

(d) ATC procedures.

§ 127.45 Heliports.

Each air carrier must show that each route it submits for approval has enough heliports that are properly equipped and adequate for the proposed operation, considering such items as size, surface, obstructions, facilities, public protection, lighting, navigational and communications aids, and ATC.

§ 127.47 Communications facilities.

(a) Each air carrier must show that a two-way air/ground radio communication system is available at points that will insure reliable and rapid communications, under normal operating conditions over the entire route (either direct or by approved point to point circuits) for the following purposes:

(1) Communications between the helicopter and the appropriate air carrier operational control office, at the minimum flight altitudes specified in its operations specifications, and independent of systems operated by the United States.

(2) Communications between the helicopter and the appropriate ATC unit.

In case of communications under subparagraph (2) of this paragraph, the Administrator may allow the use of communication systems operated by the United States.

(b) If the Administrator finds that compliance with subparagraph (1) of paragraph (a) of this section is not practicable because of terrain conditions, he may allow an exception to that subparagraph over specified segments of the route.

§ 127.49 Weather reporting facilities.

(a) Each air carrier must show that enough weather reporting services are available along each proposed route to insure weather reports (prepared and released by the U.S. National Weather Service or a source approved by the National Weather Service or prepared from in-flight pilot reports) and forecasts necessary for the operation.

(b) Each air carrier that uses forecasts to control flight movements shall prepare each forecast from weather reports specified in paragraph (a) of this section.

§ 127.51 Servicing and maintenance facilities.

Each air carrier must show that competent personnel and adequate facilities and equipment are available for servicing helicopters.

Subpart D—Air Carrier Manuals

§ 127.61 Preparation.

(a) Each air carrier shall prepare and keep current an air carrier manual for the use and guidance of flight and ground operations personnel in conducting its operations.

(b) For the purpose of this subpart, the certificate holder may prepare that part of the manual containing maintenance information and instructions, in whole or in part, in printed page form or microfilm.

§ 127.63 Contents.

(a) Each air carrier manual must—

(1) Include instructions and information necessary to allow the personnel concerned to perform their duties and responsibilities with a high degree of safety;

(2) Be in a form that is easy to revise;

(3) Have the date of last revision on each page concerned; and

(4) Not be contrary to the provisions of any applicable Federal regulation or the air carrier's operations specifications or operating certificate.

(b) Copies of the manual may be divided into two or more parts to facilitate use by personnel concerned. However, each part must contain that part of the following information that is appropriate for each group of personnel:

(1) General policies.

(2) Duties and responsibilities of each crewmember and appropriate members of the ground organization.

(3) Reference to appropriate Federal Aviation Regulations.

(4) Operational flight control.

(5) En route flight, navigation, and communication procedures, including procedures for initiating or continuing a flight if any item of equipment required for the particular kind of operation becomes inoperative or unserviceable en route.

(6) Appropriate information from the en route operations specifications, including for each approved route the types of helicopters authorized, their crew complement, the kind of operation such as VFR, day, night, etc., and any other pertinent information.

(7) Appropriate information from the heliport operations specifications including for each heliport—

(i) Its location;

(ii) Its designation (regular, alternate, provisional, etc.);

(iii) The types of helicopters authorized;

(iv) Landing and takeoff minimums;

(v) A diagram showing access and egress routes, restricted areas, prominent obstructions, usable dimensions; and

(vi) Any other pertinent information that may assist the pilot.

(8) Takeoff, en route, and landing weight limitations.

(9) Procedures for familiarizing passengers with the use of emergency equipment during flight.

(10) Emergency equipment and procedures.

(11) Procedures for determining the usability of landing and takeoff areas.

(12) Procedures for disseminating pertinent information to operations personnel.

(13) Procedures for operating in periods of ice, hail, thunderstorms, turbulence, or any potentially hazardous meteorological condition.

(14) Airman training programs, including appropriate ground, flight, and emergency phases.

(15) Instructions and procedures for maintenance, preventive maintenance, and servicing.

(16) Time limitations, or standards for determining time limitations, for overhauls, parts retirement, inspections, replacements, and checks of airframes, engines, rotors, and appliances.

(17) Procedures for refueling helicopters, eliminating fuel contamination, protection from fire (including electrostatic protection), and supervising and protecting passengers during refueling.

(18) Airworthiness inspections, including instructions covering procedures, standards, responsibilities, and authority of inspection personnel.

(19) Methods and procedures for maintaining the helicopter weight and center of gravity within approved limits.

(20) Pilot route and heliport qualification procedures.

(21) Accident notification procedures.

(22) Pertinent information on helicopter performance taken from the approved flight manual for each type of helicopter used.

(23) Other information or instructions relating to safety.

(c) Each air carrier shall maintain at least one complete master copy of the air carrier manual at its principal operations base.

§ 127.65 Distribution.

(a) Each air carrier shall furnish current copies (and the changes and additions thereto) of the air carrier manual or appropriate parts of it to—

(1) Appropriate ground operations and maintenance personnel of the air carrier;

(2) Crewmembers; and

(3) Representatives of the Administrator assigned to the air carrier.

(b) Each person to whom a manual, or appropriate parts of it, is furnished under paragraph (a) of this section shall keep it up to date with changes and additions furnished to him.

(c) For the purpose of complying with paragraph (a) of this section, a certificate holder may furnish the persons listed therein the maintenance part of the manual in microfilm form if it also furnishes and maintains a reading device that provides a legible facsimile image of the microfilmed maintenance information and instruction.

Subpart E—Helicopter Requirements

§ 127.71 General.

[(a)] No air carrier may operate a helicopter unless that helicopter meets the applicable airworthiness requirements of this chapter.

[(b) An air carrier may operate in common carriage, and for the carriage of mail, a civil helicopter which is leased or chartered to it without crew and is registered in a country which is a party to the Covention on International Civil Aivation if—

[(1) The helicopter carries an appropriate airworthiness certificate issued by the country of registration and meets the registration and identification requirements of that country;

[(2) The helicopter is of a type design which is approved under a U.S. type certificate and complies with all of the requirements of this chapter (14 CFR Chapter 1) that would be applicable to that helicopter were it registered in the United States, including the require-

ments which must be met for issuance of a U.S. standard airworthiness certificate (including type design conformity, condition for safe operation, and the noise, fuel venting, and engine emission requirements of this chapter), except that a U.S. registration certificate and a U.S. standard airworthiness certificate will not be issued for the helicopter;

(3) The helicopter is operated by U.S.-certificated airmen employed by the air carrier; and

(4) The air carrier files a copy of the helicopter lease or charter agreement with the FAA Aircraft Registry, Department of Transportation, 6400 South MacArthur Boulevard, Oklahoma City, Oklahoma (Mailing address; P.O. Box 25504, Oklahoma City, Oklahoma 73125).

§ 127.73 Proving tests.

(a) No air carrier may operate a helicopter not before proven for use in air carrier operations, unless a helicopter of that type has had, in addition to the helicopter certification tests, at least 100 hours of proving tests acceptable to the Administrator, including a representative number of flights into en route heliports. At least 10 hours of the proving tests must be flown at night, if night operations are authorized.

(b) An air carrier may not operate a helicopter of a type that has been proven in commercial or extensive military service, if it has not previously used that type, or if that helicopter has been materially altered in design, unless—

(1) The aircraft has had at least 50 hours of tests acceptable to the Administrator, including a representative number of flights into en route heliports; or

(2) The Administrator specifically authorizes deviations when special circumstances make full compliance unnecessary in a particular case.

(c) No air carrier may carry passengers in a helicopter during proving tests, except for those needed to make the test and those designated by the Administrator. However, it may carry mail, express, or other cargo, when approved.

Subpart F—Operating Limitations

§ 127.81 General.

Each air carrier shall operate each of its helicopters in accordance with operating limitations prescribed by the Administrator in the interests of safety considering the performance of the helicopter, the areas traversed, heliports used, engine failure in flight, and temperature operating correction factors set forth in the Rotorcraft flight manual.

§ 127.83 Operation of helicopters other than transport Category A.

Each air carrier shall show, for operations with helicopters certificated under Part 27 or the transport Category B provisions of Part 29 that adequate areas are available for a safe autorotative or one engine inoperative landing from any point along the route to be used and that those areas are readily identifiable in both day and night operations.

§ 127.85 Provisionally certificated helicopters.

In addition to the limitations in [§ 91.317], the following limitations apply to the operation of provisionally certificated helicopters:

(a) In addition to crewmembers, each air carrier may carry on board such a helicopter only those persons who are listed in § 127.211(c) or who are specifically authorized by both the air carrier and the Administrator.

(b) Each air carrier shall keep a log of each flight conducted under this section and shall keep accurate and complete records of each inspection made and all maintenance performed on the helicopter. The air carrier shall make the log and records made under this section available to the manufacturer and the Administrator.

Subpart G—Special Airworthiness Requirements

§ 127.91 Fire prevention.

No air carrier may use a helicopter in passenger service (for which application for type

certification was made before May 16, 1953) unless that helicopter complies with the fire prevention provisions of Part 6 of the Civil Air Regulations as in effect on May 16, 1953.

§ 127.93 Carriage of cargo in passenger compartments.

Whenever cargo cannot be loaded in approved cargo racks, bins, or compartments that are separate from passenger compartments, that cargo may be carried in the passenger compartment in accordance with the following:

(a) It is properly secured by a safety belt or other tiedown having enough strength to eliminate the possibility of shifting under all normally anticipated flight and ground conditions.

(b) It is packaged or covered to avoid possible injury to passengers.

(c) It does not impose any load on seats or on the floor structure that exceeds the load limitations for those components.

(d) It is not located in a position that restricts the access to or use of any required emergency or regular exit, or the use of the aisle between the crew and passenger compartments.

(e) It is not carried directly above seated passengers.

Subpart H—Instrument and Equipment Requirements

§ 127.101 General.

(a) Instruments and equipment required by §§ 127.103 through 127.125 must be approved and installed in accordance with the airworthiness requirements applicable to them.

(b) Except as provided in § 127.247(b), no person may take off any helicopter unless the following instruments and equipment are in operable condition:

(1) Instruments and equipment required to comply with airworthiness requirements under which the helicopter is type certificated and as required by § 127.91.

(2) Instruments and equipment specified in §§ 127.103 through 127.117 for all operations, and the instruments and equipment specified in §§ 127.119 through 127.125 for the kind of operation indicated, wherever these items are not already required by subparagraph (1) of this paragraph.

§ 127.103 Flight and navigational equipment.

No person may operate a helicopter unless it is equipped with the following flight and navigational instruments and equipment:

(a) An airspeed indicating system with heated pitot tube or equivalent means for preventing malfunctioning due to icing.

(b) A sensitive altimeter; however, after December 24, 1980, an altimeter that meets the performance and environmental standards of TSO-C10b, or equivalent.

(c) A sweep-second clock.

(d) A free-air temperature indicator.

(e) A magnetic compass.

§ 127.105 Engine instruments and equipment—reciprocating engine powered helicopters.

No person may operate a reciprocating engine powered helicopter unless it is equipped with the following engine instruments and equipment:

(a) A carburetor air temperature indicator for each engine.

(b) A cylinder head temperature indicator for each air-cooled engine.

(c) A fuel pressure indicator and warning light for each engine.

(d) A means for indicating fuel quantity in each fuel tank to be used, and for helicopters with more than one independent fuel tank, a warning device indicating when the fuel in any independent tank becomes low.

(e) A manifold pressure indicator for each engine.

(f) An oil pressure indicator and warning light for each engine.

(g) An oil-in temperature indicator for each engine.

(h) An oil temperature indicator or warning device to indicate when the oil temperature exceeds a safe value in each main rotor drive gearbox, including those gearboxes essential to rotor phasing, having an oil system independent of the engine oil system.

(i) An oil pressure indicator and warning light for each transmission using a separate oil pump.

(j) Carburetor heating or deicing equipment for each engine.

(k) If equipped with a rotor brake, a means to indicate full or partial engagement.

(l) A tachometer for the main rotor, or for each main rotor the speed of which may vary appreciably with respect to another main rotor.

(m) A tachometer for each engine.

The tachometers required by paragraphs (l) and (m) of this section may be combined in a single instrument, but that instrument must indicate rotor r.p.m. during autorotation.

§ 127.106 Engine instruments and equipment—turbine engine powered helicopters.

No person may operate a turbine engine powered helicopter unless it is equipped with the following engine instruments and equipment:

(a) A fuel pressure indicator and warning light for each engine.

(b) A means of indicating fuel quantity in each fuel tank to be used, and for helicopters with more than one fuel tank, a warning device indicating when the fuel in any independent fuel tank is low.

(c) An oil pressure indicator and warning light for each engine.

(d) An oil temperature indicator for each engine.

(e) An oil temperature indicator and warning light for each main rotor drive gearbox including those gearboxes essential to rotor phasing, having an oil system independent of the engine oil system.

(f) An oil temperature indicator and warning light for each transmission using a separate oil pump.

(g) A gas temperature indicator for each engine.

(h) An output torque indicator for each engine.

(i) A tachometer (to indicate the speed of the engine rotors with established limiting speeds) for each engine.

(j) A tachometer for the main rotor or for each main rotor the speed of which may vary appreciably with respect to another main rotor.

The tachometers required by paragraphs (i) and (j) of this section may be combined in a single instrument, but that instrument must indicate rotor RPM during autorotation.

§ 127.107 Emergency equipment.

(a) *General.* No person may operate a helicopter unless it is equipped with the emergency equipment listed in this section.

(b) Each item of emergency equipment—

(1) Must be readily accessible to the crew;

(2) Must clearly indicate its method of operation; and

(3) When carried in a compartment or container, must have that compartment or container marked as to contents.

(c) *Hand fire extinguishers for crew, passenger, and cargo compartments.* Hand fire extinguishers of a type approved by the Underwriter's Laboratories, Inc., Factory Mutual Laboratories, Underwriter's Laboratories of Canada, or any other person whose approval is acceptable to the FAA, or an extinguisher approved under § 21.305 of this chapter (and that are accessible in flight) must be provided for use in crew, passenger, and cargo compartments, in accordance with the following:

(1) The type and quantity of extinguishing agent must be suitable for the kinds of fires likely to occur in the compartment where the extinguisher is intended to be used.

(2) At least one hand fire extinguisher must be conveniently located on the flight deck for use by the flight crew.

(3) At least one hand fire extinguisher must be conveniently located in the passenger compartment of each helicopter accommodating more than six passengers.

(d) *First-aid equipment.* First-aid kits for treatment of injuries likely to occur in flight or in minor accidents must be provided in a quantity appropriate to the number of passengers and crew accommodated by the helicopter.

(e) *Interior emergency exit markings.* Each helicopter must have conspicuously marked emergency exits. Each emergency exit must have conspicuously marked means of access and means of opening. The identity and location of each emergency exit must be recognizable from a distance equal to the width of the cabin. The location of the emergency exit operating handle and the instructions for opening must be marked on or adjacent to the emergency exit and must be readable from at least 30 inches by a person with normal eyesight.

(f) *Lighting for interior emergency exit markings.* Each passenger-carrying helicopter must have a source or sources of light (with an energy supply that is independent of the main lighting system) for each passenger emergency exit marking. Each light must be designed to—

(1) Function automatically in a crash landing, to continue functioning thereafter, and to be manually operable; or

(2) Be manually operable only and to continue functioning after a crash landing.

If a light requires manual operation, it must be turned on before each takeoff and landing. If a light requires arming of the system to function automatically, the system must be armed before each takeoff and landing.

§ 127.109 Seat and safety belt.

(a) No person may operate a helicopter unless there are available during the takeoff, en route flight, and landing—

(1) An approved seat for each person on board the helicopter who has reached his second birthday; and

(2) An approved safety belt for separate use by each person on board the helicopter who has reached his second birthday.

(b) During the takeoff and landing of a helicopter, each person on board shall occupy an approved seat with a safety belt properly secured about him. A person who has not reached his second birthday may be held by an adult who is occupying a seat.

However, notwithstanding the provisions of this section, in the case of children who have reached their second birthday, but not their twelfth birthday, a safety belt may be used for two in a single seat if the strength requirements of the seat and the safety belt are not exceeded.

§ 127.111 Miscellaneous equipment.

No person may conduct any operation unless the following equipment is installed in the helicopter:

(a) A windshield wiper or equivalent for each pilot station.

(b) An alternate source of energy able to carry the necessary load for all instruments required by § 127.119 that require a power source.

(c) A means to indicate the adequacy of the power being supplied to required flight instruments.

§ 127.113 Cockpit check procedure.

(a) Each air carrier shall provide an approved cockpit check procedure for each type of helicopter.

(b) The approved procedures must include the items necessary for flight crewmembers to check for safety before starting engine(s), taking off, or landing, and in engine emergencies. The procedures must be designed so that a flight crewmember will not need to rely upon his memory for items to be checked.

(c) The approved procedures must be readily usable in the cockpit of each helicopter.

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§ 127.115 Passenger information.

(a) No person may operate a helicopter that has separate passenger and crew compartments unless it is equipped with signs that are visible to passengers and cabin attendants to notify them when smoking is prohibited and when safety belts should be fastened. The signs must be so constructed that the crew can turn them on and off. The "No smoking" sign must be left on unless a cabin attendent is carried in the passenger compartment. In single-engine helicopters, the seat belts must be fastened during the entire flight.

(b) After August 31, 1981, no person may operate a passenger-carrying helicopter under this Part unless there is affixed to each forward bulkhead and each passenger seat back a sign or placard that reads "Fasten Seat Belt While Seated." These signs or placards need not meet the requirements of paragraph (a) of this section.

§ 127.117 Exterior exit and evacuation markings.

No person may operate a helicopter unless the exterior surfaces of the helicopter are marked to clearly identify each required emergency exit. If the exits are operable from the outside, the markings must consist of or include information indicating the method of opening.

§ 127.119 Instruments and equipment for operations at night.

No person may operate a helicopter at night unless it is equipped with the following instruments and equipment in addition to those required by §§ 127.103 through 127.117:

(a) Position lights.

(b) An anti-collision light.

(c) Two landing lights, at least one of which is controllable to light the area forward of and below the helicopter.

(d) Instrument lights providing enough light to make each required instrument or switch easily readable, and installed so that the direct rays are shielded from the flight crewmember's eyes and that no objectionable reflections are visible to them. There must be a means of controlling the intensity of illumination unless the operator shows that nondimming instrument lights are satisfactory.

(e) A generator of adequate capacity.

(f) A gyroscopic bank and pitch indicator (artificial horizon).

(g) A gyroscopic direction indicator (direction gyro).

(h) A gyroscopic rate-of-turn indicator with bank indicator.

(i) A vertical speed indicator (rate-of-climb indicator).

§ 127.121 Equipment for single engine helicopter overwater operations.

No person may operate a single-engine helicopter over water beyond autorotative gliding distance from the land unless it is equipped with the following equipment:

(a) Helicopter flotation devices.

(b) A life preserver (or other adequate individual flotation device) for each occupant.

(c) Any other equipment that the Administrator determines is necessary for safety for a particular operation.

§ 127.123 Radio equipment.

(a) No person may operate a helicopter unless it is equipped with the approved radio equipment specified for the kind of operation being conducted.

[(b) ATC transponder equipment installed within the time periods indicated below must meet the performance and environmental requirements of the following TSO's.

[(1) *Through January 1, 1992:*

[(i) Any class of TSO-C74b or any class of TSO-C74c as appropriate, provided that the equipment was manufactured before January 1, 1990; or

[(ii) The appropriate class of TSO-C112 (Mode S).

[(2) *After January 1, 1992:* The appropriate class of TSO-C112 (Mode S). For purposes of paragraph (b)(2) of this section, "installation" does not include—

[(i) Temporary installation of TSO-C74b or TSO-C74c substitute equipment, as appropriate, during maintenance of the permanent equipment;

[(ii) Reinstallation of equipment after temporary removal for maintenance; or

[(iii) For fleet operations, installation of equipment in a fleet aircraft after removal of the equipment for maintenance from another aircraft in the same operator's fleet.]

§ 127.125 Radio equipment for operations over routes navigated by pilotage.

No person may operate a helicopter over a route that can be navigated by pilotage, unless the helicopter is equipped with the radio equipment needed to perform the following functions under normal operating conditions:

(a) Communicate with at least an appropriate ground station in the vicinity, as prescribed in § 127.47, and with other helicopters operated by the air carrier.

(b) Communicate with ATC towers from any point in the control zone within which flight is intended.

(c) Receive meteorological information at the minimum en route altitude specified in the air carrier's operations specifications, either separately or by the means required to comply with paragraph (a) or (b) of this section.

§ 127.127 Cockpit voice recorders.

(a) No certificate holder may operate a large transport category helicopter after July 8, 1971, unless an approved cockpit voice recorder is installed in that helicopter and is operated continuously from the start of the use of the checklist (before starting engines for the purpose of flight) to completion of the final checklist at the termination of the flight.

(b) Each cockpit voice recorder must be installed in accordance with the requirements of Part 29 of this chapter.

(c) In complying with this section, an approved cockpit voice recorder having an erasure feature may be used, so that at any time during the operation of the recorder, information recorded more than 30 minutes earlier may be erased or otherwise obliterated.

(d) In the event of an accident or occurrence requiring immediate notification of the National Transportation Safety Board under Part 830 of Title 49, which results in the termination of the flight; the certificate holder shall keep the recorded information for at least 60 days or, if required by the Administrator or the Board, for a longer period. Information obtained from the record is used to assist in determining the cause of accidents or occurrences in connection with investigations under Part 830 of Title 49. The Administrator does not use the record in any civil penalty or certificate action.

Subpart I—Maintenance, Preventive Maintenance, and Alterations

§ 127.131 Responsibility for airworthiness.

(a) Each air carrier is primarily responsible for—

(1) The airworthiness of its helicopters, including airframes, aircraft engines, appliances, and parts thereof; and

(2) The performance of the maintenance, preventive maintenance, and alteration of its helicopters, including airframes, aircraft engines, appliances, and parts thereof, in accordance with its manual and the regulations of this chapter.

(b) An air carrier may make arrangements with another person for the performance of any maintenance, preventive maintenance, or alterations. However, this does not relieve the air carrier of the responsibility specified in paragraph (a) of this section.

§ 127.132 Maintenance, preventive maintenance, and alteration organization.

(a) Each air carrier that performs any of its maintenance (other than required inspections), preventive maintenance, or alterations, and each person with whom it arranges for the performance of that work must have an organization adequate to perform the work.

(b) Each air carrier that performs any inspections required by its manual (in this subpart referred to as "required inspections") and each person with whom it arranges for the performance of that work must have an organization adequate to perform that work.

(c) Each person performing required inspections in addition to other maintenance, preventive maintenance, or alterations, shall organize the performance of those functions so as to separate the required inspection functions from the other maintenance, preventive maintenance, and alteration functions. The separation shall be below the level of administrative control at which overall responsibility for the required inspection functions and other maintenance, preventive maintenance, and alteration functions are exercised.

*U.S. G.P.O. 1987-181-773:60026

§ 127.133 Maintenance, preventive maintenance, and alterations programs.

Each air carrier shall have an inspection program and a program covering other maintenance, preventive maintenance, and alterations that ensures that—

(a) Maintenance, preventive maintenance, and alterations performed by it, or by other persons, are performed in accordance with the air carrier's manual;

(b) Competent personnel and adequate facilities and equipment are provided for the proper performance of maintenance, preventive maintenance, alterations; and

(c) Each helicopter released to service is airworthy and has been properly maintained for operation under this Part.

§ 127.134 Manual requirements.

(a) The air carrier shall put in its manual a chart or description of the air carrier's organization required by § 127.132 and a list of persons with whom it has arranged for the performance of any of its required inspections, other maintenance, preventive maintenance, or alterations, including a general description of that work.

(b) The air carrier's manual must contain the programs required by § 127.133 that must be followed in performing maintenance, preventive maintenance, and alterations of that air carrier's helicopters, including airframes, engines, rotors, appliances, and parts thereof, and must include at least the following:

(1) The method of performing routine and nonroutine maintenance (other than required inspections), preventive maintenance, and alterations.

(2) A designation of the items of maintenance, preventive maintenance, and alteration that must be inspected (required inspections), including at least those that could result in a failure, malfunction, or defect endangering the safe operation of the helicopter, if not performed properly or if improper parts or materials are used.

(3) The method of performing required inspections and a designation by occupational title of personnel authorized to perform each required inspection.

(4) Procedures for the reinspection of work performed pursuant to previous required inspection findings ("buy-back procedures").

(5) Procedures, standards, and limits necessary for required inspections and acceptance or rejection of the items required to be inspected and for periodic inspection and calibration of precision tools, measuring devices, and test equipment.

(6) Procedures to ensure that all required inspections are performed.

(7) Instructions to prevent any person who performs any item of work from performing any required inspection of that work.

(8) Instructions and procedures to prevent any decision of an inspector, regarding required inspection, from being countermanded by persons other than supervisory personnel of the inspection or a person at that level of administrative control that has overall responsibility for the management of both the required inspection functions and the other maintenance, preventive maintenance, and alterations functions.

(9) Procedures to ensure that required inspections, other maintenance, preventive maintenance, and alterations that are not completed as a result of shift changes or similar work interruptions are properly completed before the airplane is released to service.

(10) For rotorcraft for which a Rotorcraft Maintenance Manual containing an "Airworthiness Limitations" section has been issued, procedures to ensure that the replacement times, inspection intervals, and related procedures specified in that section of the manual are complied with, including applicable changes to that section of the manual.

(c) The certificate holder must set forth in its manual a suitable system (which may include a coded system), that provides for preservation and retrieval of information in a manner acceptable to the Administrator and that provides—

(Corrected in Ch. 12)

(1) A description (or reference to data acceptable to the Administrator) of the work performed;

(2) The name of the person performing the work if the work is performed by a person outside the organization of the certificate holder; and

(3) The name or other positive identification of the individual approving the work.

§ 127.135 Required inspection personnel.

(a) No person may use any person to perform required inspections unless the person performing the inspection is appropriately certificated, properly trained, qualified, and authorized to do so.

(b) No person may allow any person to perform a required inspection unless, at that time, the person performing that inspection is under the supervision and control of an inspection unit.

(c) No person may perform a required inspection if he performed the item of work required to be inspected.

(d) Each air carrier shall maintain, or shall determine that each person with whom it arranges to perform its required inspections maintains, a current listing of persons who have been trained, qualified, and authorized to conduct required inspections. The persons must be identified by name, occupational title, and the inspections that they are authorized to perform. The air carrier (or person with whom it arranges to perform its required inspections) shall give written information to each person so authorized describing the extent of his responsibilities, authorities, and inspectional limitations. The list shall be made available for inspection by the Administrator upon request.

§ 127.136 Continuing analysis and surveillance.

(a) Each air carrier shall establish and maintain a system for the continuing analysis and surveillance of the performance and effectiveness of its inspection program and the program covering other maintenance, preventive maintenance, and alterations and for the correction of any deficiency in those programs, regardless of whether those programs are carried out by the air carrier or by another person.

(b) Whenever the Administrator finds that either or both of the programs described in paragraph (a) of this paragraph does not contain adequate procedures and standards to meet the requirements of this Part, the air carrier shall, after notification by the Administrator, make any changes in those programs that are necessary to meet those requirements.

(c) An air carrier may petition the Administrator to reconsider the notice to make a change in a program. The petition must be filed with the FAA Air Carrier District Office charged with the overall inspection of the air carrier's operations within 30 days after the air carrier receives the notice. Except in the case of an emergency requiring immediate action in the interest of safety, the filing of the petition stays the notice pending a decision by the Administrator.

§ 127.137 Maintenance and preventive maintenance training program.

Each air carrier or person performing maintenance or preventive maintenance functions for it shall have a training program to ensure that each person (including inspection personnel) who determines the adequacy of work done is fully informed about procedures and techniques and new equipment in use and is competent to perform his duties.

§ 127.138 Maintenance and preventive maintenance personnel duty time limitations.

Each air carrier (or person performing maintenance or preventive maintenance functions for it) shall relieve each person performing maintenance or preventive maintenance from duty for a period of at least 24 consecutive hours during any seven consecutive days, or the equivalent thereof within any one calendar month.

§ 127.139 Certificate requirements.

(a) Except for maintenance, preventive maintenance, alterations, and required inspections performed by repair stations certificated

under the provisions of Subpart C of Part 145, each person who is directly in charge of maintenance, preventive maintenance, or alteration, and each person performing required inspections must hold an appropriate airman certificate.

(b) For the purposes of this section, a person "directly in charge" is each person assigned to a position in which he is responsible for the work of a shop or station that performs maintenance, preventive maintenance, alterations, or other functions affecting aircraft airworthiness. A person who is "directly in charge" need not physically observe and direct each worker constantly but must be available for consultation and decision on matters requiring instruction or decision from higher authority than that of the persons performing the work.

§ 127.140 Authority to perform and approve maintenance, preventive maintenance, and alterations.

(a) An air carrier may perform, or it may make arrangements with other persons to perform, maintenance, preventive maintenance, and alterations as provided in its continuous airworthiness maintenance program and its maintenance manual. In addition, an air carrier may perform these functions for another air carrier as provided in the continuous airworthiness maintenance program and maintenance manual of the other air carrier.

(b) An air carrier may approve any helicopter, airframe, aircraft engine, propeller, or appliance for return to service after maintenance, preventive maintenance, or alterations that are performed under paragraph (a) of this section. However, in the case of a major repair or major alteration, the work must have been done in accordance with technical data approved by the Administrator.

§ 127.141 Maintenance recording requirements.

(a) Each certificate holder shall keep (using the system specified in the manual required in § 127.134) the following records for the periods specified in paragraph (b) of this section:

(1) All the records necessary to show that all the requirements for the issuance of an airworthiness release under § 127.319 have been met.

(2) Records containing the following information.

(i) The total time in service of the airframe.

(ii) The current status of life-limited parts of each airframe, engine, propeller, rotor, and appliance.

(iii) The time since last overhaul of all items installed on the aircraft which are required to be overhauled on a specified time basis.

(iv) The identification of the current inspection status of the aircraft, including the times since the last inspections required by the inspection program under which the aircraft and its appliances are maintained.

(v) The current status of applicable airworthiness directives, including the method of compliance.

(vi) A list of current major alterations to each airframe, engine, propeller, rotor, and appliance.

(b) Each certificate holder shall retain the records required to be kept by this section for the following periods:

(1) Except for the records of the last complete overhaul of each airframe, engine, propeller, rotor, and appliance, the records specified in paragraph (a)(1) of this section shall be retained until the work is repeated or superseded by other work or for one year after the work is performed.

(2) The records of the last complete overhaul of each airframe, engine, propeller, rotor, and appliance shall be retained until the work is superseded by work of equivalent scope and detail.

(3) The records specified in paragraph (a)(2) of this section shall be retained and transferred with the aircraft at the time the aircraft is sold.

(c) The certificate holder shall make all maintenance records required to be kept by this section available for inspection by the Administrator or any authorized representative of the National Transportation Safety Board (NTSB).

§ 127.142 Transfer of maintenance records.

Each certificate holder who sells a U.S. registered aircraft shall transfer to the purchaser, at the time of sale, the following records of that aircraft, in plain language form or in coded form at the election of the purchaser, if the coded form provides for the preservation and retrieval of information in a manner acceptable to the Administrator:

(a) The records specified in § 127.141(a)(2).

(b) The records specified in § 127.141(a)(1) which are not included in the records covered by paragraph (a) of this section, except that the purchaser may permit the seller to keep physical custody of such records. However, custody of records in the seller does not relieve the purchaser of his responsibility under § 127.141(c) to make the records available for inspection by the Administrator or any authorized representative of the National Transportation Safety Board (NTSB).

Subpart J—Airman and Crewmember Requirements

§ 127.143 Airmen: limitations on use of services.

No air carrier may use a person as an airman unless that person holds an appropriate and valid airman certificate issued under this chapter and is otherwise qualified for the operation for which he is to be used.

§ 127.145 Composition of flight crew.

(a) No air carrier may operate a helicopter with less than the minimum flight crew specified in the airworthiness certificate for the helicopter and required by the kind of operation being conducted.

(b) If the air carrier is authorized to operate IFR or operates large helicopters, the minimum pilot crew is two pilots.

§ 127.147 Flight attendant.

Each air carrier conducting a passenger operation shall provide at least one flight attendant for each flight in a helicopter of more than 19-passenger capacity.

§ 127.149 Emergency and emergency evacuation duties.

(a) Each certificate holder shall, for each type of helicopter, assign to each category of required crewmember, as appropriate, the necessary functions to be performed in an emergency or a situation requiring emergency evacuation. The certificate holder shall show those functions are realistic, can be practically accomplished, and will meet any reasonably anticipated emergency including the possible incapacitation of individual crewmembers or their inability to reach the passenger cabin because of shifting cargo in combination cargo-passenger helicopters.

(b) The certificate holder shall describe in its manual the functions of each category of required crewmembers under paragraph (a) of this section.

Subpart K—Training Programs

[§ 127.151 Establishment.

[(a) Each air carrier shall establish an approved training program that insures that each crewmember is adequately trained to perform that crewmember's assigned duties. Before serving in scheduled operations, each crewmember must satisfactorily complete the initial training phases.]

(b) Each air carrier shall provide adequate ground and flight training facilities and properly qualified instructors for the training required by this section, and enough approved check airmen to conduct the flight checks required by this Part. The check airmen must hold the airman certificates and ratings that are required for the airmen being checked.

(c) The training program for each flight crewmember must consist of appropriate ground and flight training, including proper flight crew coordination. The air carrier shall standardize procedures for each flight crew function to the extent that each flight crewmember knows the functions for which he is responsible and the relation of those functions to the functions of other flight crewmembers. The initial program must include at least the requirements set forth in §§ 127.153 through 127.157.

(d) The crewmember emergency procedures training program must include at least the requirements set forth in § 127.157.

(e) Each instructor, supervisor, or check airman that is responsible for a particular training check or flight check shall certify as to the proficiency of the crewmember and person employed in operational control after he completes his initial training and after he completes his recurrent training. That certification shall be made a part of the record of the person being checked.

§ 127.153 Initial ground training: pilots.

Each air carrier shall provide at least the following initial ground training for each pilot before he serves as a pilot:

(a) Instruction in the appropriate provisions of the air carrier's operations specifications and of this chapter especially the operating and flight release rules and helicopter operating limitations.

(b) Operational control procedures and appropriate contents of the manuals.

(c) Duties and responsibilities of crewmembers.

(d) The type of helicopter to be flown, including a study of the helicopter, engines, major components and systems, performance limitations, standard and emergency operating procedures, and appropriate contents of the approved Helicopter Flight Manual.

(e) Principles and methods for determining weight and balance limitations for takeoff and landing.

(f) Navigation and the use of appropriate navigation aids.

(g) Airport, heliport, air traffic control systems and procedures, and ground control letdown procedures, if pertinent.

(h) Enough meteorology to insure a practical knowledge of the principles of icing, fog, thunderstorms, and frontal systems.

(i) Procedures for operating in turbulent air, icing, hail, thunderstorm, and other potentially hazardous meteorological conditions.

§ 127.155 Initial flight training: pilots.

The initial flight training that the air carrier must provide for each pilot must include at least--

(a) Takeoffs and landings;

(b) Normal and emergency flight maneuvers, including approaches and landings with simulated one engine inoperative in each type of helicopter to be flown by the pilot in scheduled operations; and

(c) If night operations are authorized, night takeoffs and landings.

§ 127.157 Crewmember emergency training.

Each air carrier shall design its training in emergency procedures to give each crewmember appropriate individual instruction in emergency procedures. The training must include at least procedures—

(a) To be followed in event of the failure of an engine or other component or system;

(b) To be followed in event of fire in the air or on the ground;

(c) To be followed in event of ditching;

(d) To be followed in event of evacuation;

(e) Pertaining to the location and operation of emergency equipment; and

(f) Pertaining to limitations on maximum and minimum engine and rotor r.p.m.

§ 127.159 Operations personnel.

Each air carrier shall establish and maintain a training program to insure that operations personnel who perform duties involving operational control are adequately trained to perform those duties. The air carrier may not assign a person to perform duties involving operational control until he has passed a test on those duties and responsibilities.

§ 127.161 Recurrent training.

(a) Each air carrier shall provide the training necessary to insure the continued competence of each crewmember and each person engaged in operational control and to insure that each has adequate knowledge of, and familiarity with, any new equipment or new procedures to be used by him.

(b) Each air carrier shall, at intervals established in the training program, but not more than each 12 months, check the competence of each crewmember and each person engaged in operational control, with respect to procedures, techniques, and information essential to the satisfactory performance of his duties. If the check of a pilot in command requires actual flight, the check is met by a check made under § 127.177.

(c) The appropriate instructor, supervisor, or check airman shall certify as to the proficiency shown, and that certification becomes a part of the person's record. In the case of a pilot other than a pilot in command, a pilot in command may make that certification.

Subpart L—Flight Crewmember Qualification

§ 127.171 General.

(a) No air carrier may use a flight crewmember and no flight crewmember may perform duties under his airman certificate, unless he meets the appropriate requirements in §§ 127.151 or 127.161 and 127.175 through 127.181.

(b) When a pilot completes a check required by this subpart the check airman who is responsible for the particular check shall certify that the pilot is proficient. This certification shall be made a part of the pilot's record.

§ 127.173 Pilot qualification: certificates required.

(a) No pilot may act as pilot in command of a helicopter unless he holds an airline transport pilot certificate and an appropriate type rating for that helicopter.

(b) Each pilot who acts as a pilot in a capacity other than as pilot in command must hold at least a commercial pilot certificate and a helicopter rating.

§ 127.175 Pilot qualification: recent experience.

No air carrier may use a pilot in scheduled air transportation unless, within the preceding 90 days, he has made at least three takeoffs and three landings in each type of helicopter in which he is to serve. At least two of the landings must have been from an approach in autorotation in each type single-engine helicopter in which he is to serve. In addition, if the pilot is scheduled to serve in air transportation at night, at least one of the autorotative landings must have been made at night.

§ 127.177 Pilot checks.

(a) *Line check.* No air carrier may use a pilot as pilot in command until he has passed a line check in one of the types of helicopters that he is to fly. Thereafter he may not serve as a pilot in command unless each 12 calendar months he passes a similar line check. The line check may be given at any time during the calendar month before or the month after the month in which it is due without affecting its effective date. The check must be given by a check pilot who is qualified on the route. The check must consist of at least one scheduled flight between terminals over a route to which the pilot is normally assigned. The check pilot must determine whether the pilot being checked satisfactorily performs the duties and responsibilities of a pilot in command.

(b) *Proficiency check.* No air carrier may use a pilot as a pilot in command unless he has satisfactorily shown to the Administrator or a check pilot that he is able to pilot and navigate helicopters that he is to fly. Thereafter he may not serve as a pilot in command unless each six calendar months he passes a similar pilot proficiency check. The check may be given at any time during the calendar month before or the calendar month after the calendar month in which it is due without affecting its effective date. If a pilot serves in more than one helicopter type, the check must be given alternately in a helicopter of each type in which he serves. The proficiency check must include the following:

(1) An oral equipment test covering the subjects listed in § 127.153(d), accomplished in the carrier's ground school or during a proficiency or line check.

(2) Approaches and landings with simulated one engine inoperative in multiengine

helicopters, or autorotation in single engine helicopters.

(3) Normal takeoffs and landings.

(4) Crosswind landings.

(5) Climbs.

(6) Climbing turns.

(7) Steep turns.

(8) Maneuvering at minimum speeds.

(9) Rapid descents and quick stops.

(10) A review of the emergency procedures listed in § 127.157.

§ 127.179 Pilot route and heliport qualification requirements.

(a) No air carrier may use a pilot as pilot in command until he has qualified for the route on which he is to serve, in accordance with paragraphs (b) through (d) of this section, and the appropriate instructor or check pilot has so certified.

(b) Each qualifying pilot shall show that he has adequate knowledge of the following:

(1) Weather characteristics.

(2) Navigation facilities.

(3) Communication procedures.

(4) Types of terrain and obstruction hazards.

(5) Minimum safe flight levels.

(6) Position reporting points.

(7) Holding procedures.

(8) Pertinent ATC procedures.

(9) Congested areas, obstructions, physical layout, and approach procedures for each heliport approved for the route.

(c) Each pilot in command must have made an entry, as a member of a flight crew, into each heliport into which he is to fly. The entry must include a landing and takeoff under day VFR weather conditions to allow him to observe the heliport and surrounding terrain, and any obstructions to landing and takeoff. The qualifying pilot must occupy a seat in the pilot compartment and be accompanied by a pilot who is qualified at that heliport.

(d) Each pilot in command who is to be qualified for night passenger operations must be qualified in accordance with paragraphs (b) and (c) of this section. In addition, he must have made one trip over the route at night with a pilot who is qualified for night operations on the route.

§ 127.181 Maintenance and re-establishment of pilot route and heliport qualifications.

(a) An air carrier may not use a pilot as pilot in command on a route unless that pilot has maintained his qualification on that route in accordance with paragraph (b) or (c) of this section or re-established his qualification under § 127.179.

(b) To maintain route qualification for use as a single-engine helicopter pilot, a pilot must make at least one trip as a flight crewmember between heliports on the route during each consecutive 6-month period after the month in which he establishes his route qualification under § 127.179.

(c) To maintain route qualification for use as multiengine helicopter pilot, a pilot must make at least one trip as a flight crewmember between heliports on the route during each consecutive 12-month period after the month in which he establishes his route qualification under § 127.179.

Subpart M—Flight Time Limitations

§ 127.191 General.

(a) No air carrier may schedule any flight crewmembers for flight time in scheduled air transportation or in other commercial flying, if his total flight time in all commercial flying would be more than—

(1) 1000 hours in any calendar year;

(2) 100 hours in any calendar month; or

(3) 30 hours in any seven consecutive days.

(b) No air carrier may schedule a flight crewmember for flight time for more than eight hours during any 24 consecutive hours unless he is given an intervening rest period at or before the end of the eight scheduled hours aloft. The rest period must be at least twice the number of hours of flight time since the preceding rest period, but not less than eight hours.

(c) A flight crewmember who has had more than eight hours of flight time in any 24 consecutive hours must, upon completing his assigned flight or series of flights, be given at least 16 hours of rest before being assigned any further duty with the air carrier.

(d) Each air carrier shall relieve each flight crewmember engaged in scheduled air transportation from all duty for at least 24 consecutive hours at least once during any seven consecutive days.

(e) No air carrier may assign a flight crewmember to any duty with it during a rest period prescribed in this section.

(f) A flight crewmember is not considered to be scheduled for duty in excess of any limitation in this section, if the flights to which he is assigned are scheduled and normally terminate within those limitations, but due to exigencies beyond the air carrier's control (such as adverse weather conditions) are not at the time of departure expected to reach their destination within the scheduled time.

Subpart N—Flight Operations

§ 127.201 Operational control.

(a) Each air carrier is responsible for operational control.

(b) Each air carrier is responsible for—

(1) The exercise of necessary authority for the initiation, continuation, diversion, or termination of a flight; and

(2) Monitoring the progress of each flight and providing the pilot with all information necessary for the safety of the flight.

(c) Each pilot in command of a helicopter is, during flight time, in command of the helicopter and crew and is responsible for the safety of the passengers, crewmembers, cargo, and aircraft.

(d) Each pilot in command of a helicopter is responsible for the preflight planning and the operation of the flight in compliance with this chapter and the operations specifications.

§ 127.203 Operations notices.

Each air carrier shall notify its appropriate operations personnel of each change in equipment and operating procedures, including each known change in the use of navigation aids, heliports, ATC procedures and regulations, local airport traffic control rules, and known hazards to flight, including icing and other potentially hazardous meteorological conditions and irregularities in ground and navigation facilities.

§ 127.205 Operations schedules.

In establishing flight operations schedules, each air carrier shall allow enough time for the proper servicing of helicopters with fuel and oil at intermediate stops. In addition, it shall consider the prevailing winds along the particular route and the cruising speed of the type of helicopter to be flown, and that speed may not be more than that achieved with the engines operating at specified cruising power.

§ 127.207 Flight crewmembers at controls.

Each required flight crewmember on flight deck duty shall remain at his station while the helicopter is taking off or landing, and while it is en route except when the absence of one member is necessary for performing his duties in connection with operating the helicopter or in connection with his physiological needs. Each flight crewmember shall keep his seat belt fastened when at his station.

§ 127.209 Manipulation of controls.

No person may manipulate the flight controls of a helicopter during flight unless he is—

(a) A qualified pilot employed by the air carrier operating that helicopter;

(b) An authorized pilot safety representative of the Administrator or of the National Transportation Safety Board who has the permission of the pilot in command, is qualified in the helicopter, and is checking flight operations; or

(c) A pilot employed by another air carrier who has the permission of the pilot in command, is qualified in the helicopter, and is authorized by the carrier operating the helicopter.

§ 127.211 Admission to flight deck.

(a) No person may admit any person to the flight deck of a helicopter unless the person being admitted is—

(1) A crewmember;

(2) An FAA air carrier inspector, or an authorized representative of the National Transportation Safety Board, who is performing official duties;

(3) An employee of the United States, an air carrier, or an aeronautical enterprise who has the permission of the pilot in command and whose duties are such that admission to the flight deck is necessary or advantageous for safe operations; or

(4) Any person who has the permission of the pilot in command and is specifically authorized by the air carrier management and by the Administrator. Subparagraph (2) of this paragraph does not limit the emergency authority of the pilot in command to exclude any person from the flight deck in the interests of safety.

(b) For the purposes of paragraph (a)(3) of this section, employees of the United States who deal responsibly with matters relating to safety and employees of the air carrier whose efficiency would be increased by familiarity with flight conditions, may be admitted by the air carrier. However, the air carrier may not admit employees of traffic, sales, or other departments that are not directly related to flight operations, unless they are eligible under paragraph (a)(4) of this section.

(c) No person may admit any person to the flight deck unless there is a seat available in the passenger compartment for the use of the person admitted. This paragraph does not apply to—

(1) An FAA air carrier inspector or an authorized representative of the Administrator or National Transportation Safety Board who is checking or observing flight operations;

(2) An air traffic controller who is authorized by the Administrator to observe ATC procedures;

(3) A certificated airman employed by the air carrier whose duties require an airman's certificate;

(4) A certificated airman employed by another air carrier whose duties with that carrier require an airman's certificate and who is authorized by the carrier operating the helicopter to make specific trips over a route;

(5) An employee of the air carrier operating the helicopter whose duty is directly related to the conduct or planning of flight operations, in-flight monitoring of aircraft equipment, or operating procedures, if his presence on the flight deck is necessary to perform his duties and he has been authorized in writing by a responsible supervisor, listed in the operations manual as having that authority; and

(6) A technical representative of the manufacturer of the helicopter or its components whose duties are directly related to the in-flight monitoring of aircraft equipment or operating procedures if his presence on the flight deck is necessary to perform his duties, and he has been authorized in writing by the Administrator and by a responsible supervisor of the operations department of the air carrier listed in the operations manual as having that authority.

[§ 127.212 Aviation safety inspector's credentials: admission to pilot's compartment.

[Whenever, in performing the duties of conducting an inspection, an inspector of the Federal Aviation Administration presents Form FAA 110A, "Aviation Safety Inspector's Credential", to the pilot in command of a helicopter operated by an air carrier, the inspector must be given free and uninterrupted access to the pilot's compartment of that helicopter.]

§ 127.213 Use of cockpit check procedure.

The flight crew shall use the cockpit check procedure for each procedure listed in § 127.113.

§ 127.214 Secret Service Agents: admission to pilot's compartment.

Whenever an Agent of the Secret Service who is assigned the duty of protecting a person aboard a helicopter operated by an air

carrier considers it necessary in the performance of his duty to ride in the pilot's compartment of the helicopter, he shall upon request and presentation of his Secret Service credentials to the pilot in command of the aircraft, be admitted to the pilot's compartment.

§ 127.215 Flying equipment.

(a) The pilot in command shall insure that appropriate aeronautical charts containing adequate information concerning navigation aids and instrument approach procedures are aboard the helicopter for each flight.

(b) The pilot in command shall insure that each crewmember, on each flight at night, has readily available for his use a flashlight that is in good working order.

§ 127.217 Restriction or suspension of operation.

When an air carrier knows of conditions, including heliport conditions, that are a hazard to safe operations, it shall restrict or suspend operations until those conditions are corrected.

§ 127.218 Use of certificated heliports: scheduled helicopter air carriers.

Unless otherwise authorized by the Administrator, no scheduled helicopter air carrier and no pilot being used by it may, in the conduct of operations governed by this Part, operate a helicopter into a heliport in any State of the United States, the District of Columbia, or any territory or possession of the United States, unless that heliport is certificated under Part 139 of this chapter.

§ 127.219 Emergencies.

(a) In an emergency situation that requires immediate decision and action, the pilot in command may take any action that he considers necessary under the circumstances. In such a case, he may deviate from prescribed operations procedures and methods, weather minimums, and this chapter, to the extent required in the interests of safety.

(b) Whenever emergency authority is exercised by the pilot in command, he shall keep the air carrier fully informed of the progress of the flight. The person declaring the emergency shall send a written report of any deviation, through the air carrier's director of operations, to the Administrator within 10 days after the flight is completed.

(c) No pilot in command may deviate from an authorized route, except in accordance with ATC instructions issued by a control tower or center or when circumstances make the deviation necessary in the interests of safety. In the case of a deviation (based on safety) that is more than 10 miles off the authorized route, the pilot shall make a written report to the Administrator within 10 days after the deviation.

§ 127.221 Reporting potentially hazardous meteorological conditions and irregularities of ground and navigation facilities.

(a) Whenever he encounters, in flight, a meteorological condition or an irregularity in a ground or navigational facility, the knowledge of which he considers essential to the safety of other flights, the pilot in command shall notify an appropriate ground radio station as soon as practicable.

(b) The ground radio station that is notified under paragraph (a) of this section, shall report the information to the appropriate agency of the United States.

§ 127.223 Reporting mechanical irregularities.

The pilot in comand shall enter or have entered in the maintenance log of the helicopter each mechanical irregularity met during flight time. Before each flight, he shall ascertain the status of each irregularity entered in the log at the end of the preceding flight.

§ 127.225 Weather minimums.

No person may start a flight, continue en route, or land at a destination heliport except in accordance with the weather requirements in the air carrier's operations specifications.

[§ 127.226 Briefing passengers after takeoff.

[After each takeoff of a helicopter that has separate passenger and crew compartments, immediately before or immediately after turning the seat belt sign off, an announcement shall be made that passengers should keep their safety belts fastened while seated, even when the seat belt sign is off.]

§ 127.227 Prohibition against carriage of weapons.

No person may, while on board a helicopter being operated under this Part, carry on or about his person a deadly or dangerous weapon, either concealed or unconcealed. This section does not apply to—

(a) Officials or employees of a municipality or a State, or of the United States, who are authorized to carry arms; or

(b) Crewmembers and other persons authorized by the air carrier to carry arms.

§ 127.229 Alcoholic beverages.

(a) No person may drink any alcoholic beverage aboard a helicopter unless the certificate holder operating the helicopter has served that beverage to him.

(b) No certificate holder may serve any alcoholic beverage to any person aboard any of its helicopters if that person appears to be intoxicated.

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(c) No certificate holder may allow any person to board any of its helicopters if that person appears to be intoxicated.

(d) Each certificate holder shall, within five days after the incident, report to the Administrator the refusal of any person to comply with paragraph (a) of this section, or any disturbance caused by a person who appears to be intoxicated aboard any of its helicopters.

Subpart O—Flight Release Rules

§ 127.231 Flight release.

No person may start a flight unless the pilot in command has executed a flight release form setting forth the conditions under which the flight will be conducted and certifying that it will be conducted in accordance with this chapter and the air carrier's operating specifications. If the flight originates at a place other than the normal operating base, the form may be executed orally to the operation control center, and be made a matter of record. A flight that stays at an intermediate heliport for more than 60 minutes requires a new flight release.

§ 127.233 Familiarity with weather conditions.

No pilot in command may execute a flight release unless he is thoroughly familiar with existing and anticipated weather conditions along the route to be flown.

§ 127.235 Facilities and services.

(a) Before beginning a flight, the operational control center shall furnish to the pilot in command all available current reports or information on heliport conditions and irregularities of navigation facilities that may affect the safety of the flight.

(b) During a flight, the operational control center shall furnish the pilot any additional information of meteorological conditions and irregularities of facilities and services that may affect the safety of the flight.

§ 127.237 Helicopter equipment.

No person may release a helicopter for operation unless it is airworthy and is equipped as prescribed in § 127.101.

§ 127.239 Communication and navigation facilities.

No person may release a helicopter for flight over any route or route segment unless the communication and navigation facilities required by § 127.47 are in satisfactory operating condition.

§ 127.241 Flight release under VFR.

No person may release a helicopter for VFR operation unless the ceiling and visibility en route, as indicated by appropriate weather reports or forecasts, or any combination thereof, are and will remain at or above VFR minimums until the helicopter arrives at the heliport or heliports of intended landing specified in the flight release.

§ 127.243 IFR operations.

The Administrator may authorize an air carrier to conduct IFR operations if upon its application, he finds that the helicopter is properly certificated for instrument flight and the pilots are capable of instrument flight in helicopters. If the authority is granted, complete procedures are specified in the air carrier's operations specifications.

§ 127.245 Visual ground reference requirements.

Except when authorized under § 127.243, no air carrier may operate a helicopter unless meteorological conditions allow enough visual ground reference for proper control of the helicopter, or unless, at night, there are ample ground reference lights available for the purpose.

§ 127.247 Continuing flight in unsafe conditions.

(a) If, in the opinion of the pilot in command, or the air carrier, a flight cannot be completed safely, the pilot in command may not allow the flight to continue toward any heliport to which it was released, unless, in his opinion there is no safer procedure. In that event, continuation toward that heliport is an emergency situation set forth in § 127.219.

(b) If any item of equipment required under this chapter for the particular operation becomes inoperative en route, the pilot in command shall comply with the approved procedures for such an occurrence specified in the air carrier manual. The Administrator may authorize procedures in the air carrier manual for continued operation beyond a scheduled terminal if he finds, under the circumstances, literal compliance with this paragraph is not necessary in the interests of safety.

§ 127.249 Operation in icing conditions.

(a) No person may release a helicopter, continue to operate a helicopter en route, or land a helicopter if, in the opinion of the pilot in command, or the air carrier, icing conditions are expected or met that might adversely affect the safety of the flight.

[(b) No person may take off a helicopter that has frost, snow or ice adhering to its windshield, rotors, stabilizing or control surfaces, or other movable parts of the helicopter or to an altimeter, airspeed, rate of climb, or flight attitude instrument system.]

§ 127.251 Release and continuance of flight.

(a) A heliport that is specified as the intended destination may be changed en route to another heliport if the original flight release is amended.

(b) If the flight release is amended while the helicopter is en route, the air carrier shall make the amendment a matter of record.

§ 127.253 Fuel supply for VFR operations.

No person may release a helicopter for VFR flight unless it carries enough fuel—

(a) To fly to the heliport to which released; and

(b) Thereafter, to fly at least 20 minutes at normal cruising consumption

§ 127.255 Factors in computing required fuel.

In computing required fuel, the air carrier shall consider the wind and other weather conditions forecast, traffic delays anticipated, and any other conditions that might delay the landing. Required fuel is in addition to unusable fuel.

§ 127.257 Takeoff and landing minimums; VFR.

Regardless of any clearance from ATC, no person may take off a helicopter or land it under VFR if the reported ceiling or ground visibility is less than that specified in the air carrier's operations specifications.

§ 127.259 Minimum flight altitudes.

The Administrator prescribes minimum flight altitudes in the interests of safety for any route or route segment. In establishing them he considers the character of the terrain to be traversed, the type of helicopter, the availability of suitable emergency landing areas, the quality and quantity of meteorological services, the navigational facilities available, and other pertinent flight conditions.

§ 127.261 Preparation of load manifest.

Each air carrier is responsible for the preparation and accuracy of a load manifest form before each takeoff. The form must be prepared for each flight by employees of the air carrier who have the duty of supervising the loading of helicopters and preparing the load manifest forms or by other qualified persons authorized by the air carrier.

Subpart P—Records and Reports

§ 127.301 Crewmember records.

Each air carrier shall—

(a) Maintain a current record of each crewmember showing whether he complies with this chapter (e.g. proficiency and route checks helicopter and route qualifications, training, physical examination, and flight time records); and

(b) Record each action taken concerning the release from employment or the physical or professional disqualification of any flight crewmember. The air carrier shall keep each record made under this section for a period of at least three calendar months.

§ 127.303 Flight release form.

(a) The flight release may be in any form but must contain at least the following information concerning each flight:

(1) The registration number of the helicopter being used.

(2) Flight or trip number.

(3) Departure heliport, destination heliports, and routes to be followed.

(4) Minimum fuel supply.

(5) Date and time of release.

(6) Kind of operation (e.g. VFR, day, night, etc.)

(b) A flight release executed orally under § 127.231 must be recorded.

§ 127.305 Load manifest.

(a) The load manifest must contain the following information concerning the loading of the helicopter at takeoff time:

(1) The weight of the helicopter, fuel and oil, cargo and baggage, and passengers.

(2) The maximum allowable weight for that flight.

(3) The total weight computed in accordance with approved procedures.

(4) Evidence that the helicopter is loaded in accordance with an approved schedule that the center of gravity is within approved limits.

(5) The time and date of preparation, registration number of the helicopter and trim number.

[(6) Names of persons unless the certificate holder maintains that information by other means.]

(b) Qualified personnel of the air carrier who supervise the loading of the helicopter and preparation of load manifest forms, or other qualified personnel authorized by the air carrier, shall prepare and sign the load manifest for each flight.

[§ 127.307 Disposition of load manifest and flight release.

[(a) The pilot in command of a helicopter shall carry in the helicopter to its destination, a copy of the completed load manifest (or information from it except with respect to cargo, passenger distribution, and the passenger list) and the flight release.]

(b) The air carrier shall keep copies of the records required by this section for at least 60 days.

§ 127.308 [Reserved]

§ 127.309 [Reserved]

§ 127.311 Maintenance log.

(a) Each person who takes action in the case of a reported or observed failure or malfunction of an airframe, engine, rotor, or appliance that is critical to the safety of flight shall make, or have made, a record of that action in the helicopter's maintenance log.

(b) Each air carrier shall have an approved procedure for keeping an adequate number of copies of the record required in paragraph (a) of this section in the helicopter in a place readily accessible to each flight crewmember and shall put that procedure in the air carrier manual.

§ 127.313 Mechanical reliability reports.

(a) Each air carrier shall report the occurrence or detection of each failure, malfunction, or defect concerning—

(1) Fires during flight and whether the related fire-warning system functioned properly;

(2) Fires during flight not protected by a related fire-warning system;

(3) False fire warning during flight;

(4) An engine exhaust system that causes damage during flight to the engine, adjacent structure, equipment, or components;

(5) A helicopter component that causes accumulation or circulation of smoke, vapor, or toxic or noxious fumes in the crew compartment or cabin during flight;

(6) Engine shutdown during flight because of flameout;

(7) Engine shutdown during flight when external damage to the engine or helicopter structure occurs;

(8) Engine shutdown during flight due to icing or foreign object ingestion;

(9) A fuel system that affects fuel flow or causes hazardous leakage during flight;

(10) A helicopter structure that requires major repair;

(11) Cracks, permanent deformation, or corrosion of helicopter structures, if more

than the maximum acceptable to the manufacturer or the FAA;

(12) Helicopter components or systems that result in taking emergency actions during flight (except action to shutdown an engine); and

(13) Main rotor or auxiliary rotor system.

(b) For the purpose of this section "during flight" means the period from the moment the helicopter leaves the surface of the earth on takeoff until it touches down on landing.

(c) In addition to the reports required by paragraph (a) of this section, each air carrier shall report any other failure, malfunction, or defect in a helicopter or component that occurs or is detected at any time if, in the air carrier's opinion, that failure, malfunction, or defect has endangered or may endanger the safe operation of the helicopter.

(d) Each air carrier shall send each report required by this section, in writing, covering each 24-hour period beginning at 0900 hours local time of each day and ending at 0900 hours local time on the next day, to the FAA maintenance inspector assigned to its operations. The report must be delivered to him by 0900 hours local time on the following day. However, a report that is due on Saturday or Sunday may be delivered on the following Monday and one that is due on a legal holiday may be delivered on the next workday.

(e) The air carrier shall transmit the reports required by this section in a manner and on a form that is convenient to its system of communication and procedure, and shall include in the first daily report as much of the following as is available:

(1) Type and identification number of the helicopter.

(2) The name of the air carrier.

(3) The date, flight number, and stage during which the incident occurred (e.g. preflight, takeoff, climb, cruise, descent, landing, and inspection).

(4) The emergency procedure effected (e.g. unscheduled landing, emergency descent).

(5) The nature of the failure, malfunction, or defect.

(6) Identification of the part and system involved, including available information pertaining to type designation of the major component and time since overhaul.

(7) Apparent cause of the failure, malfunction, or defect (e.g. wear, crack, design deficiency, or personal error).

(8) Whether the part was repaired, replaced, sent to the manufacturer, or other action taken.

(9) Whether the helicopter was grounded.

(10) Brief narrative summary of other information necessary for more complete identification, determination of seriousness, or corrective action.

(f) An air carrier that is also the holder of a Type Certificate (including a Supplemental Type Certificate), a Parts Manufacturer Approval (PMA), or a TSO authorization, or that is the licensee of a Type Certificate, need not report a failure, malfunction, or defect, under this section if the failure, malfunction, or defect has been reported by it under § 21.3 or § 37.17 of this chapter or under the accident reporting provisions of Part [830] of the regulations of the National Transportation Safety Board.

(g) No person may withhold a report required by this section even though all information required by this section is not available.

(h) When an air carrier gets additional information, including information from the manufacturer or other agency, concerning a report required by this section, it shall expeditiously submit it as a supplement to the first report and reference the date and place of submission of the first report.

§ 127.315 Mechanical interruption summary report.

Each air carrier shall regularly and promptly send a summary report on the following occurrences to the Administrator:

(a) Each interruption to a scheduled flight, unscheduled changes of helicopters en route, or unscheduled stop or diversion from a route, caused by known or suspected mechanical diffi-

culties or malfunctions that are not required to be reported under § 127.313.

(b) The number of engines removed prematurely because of malfunction, failure, or defect, listed by make and model and the helicopter type in which it was installed.

§ 127.317 Alteration and repair reports.

Each air carrier shall, promptly upon its completion, prepare a report of each major alteration or major repair of an airframe, engine, rotor, or appliance, of a helicopter operated by it. It shall promptly make a copy of the report available to the Administrator.

§ 127.319 Airworthiness release or helicopter log entries.

(a) No air carrier may operate a helicopter after maintenance or alterations are performed on the helicopter unless the air carrier, or the person with whom the air carrier arranges for the performance of the maintenance or alterations, prepares or causes to be prepared—

(1) An airworthiness release; or

(2) An appropriate entry in the helicopter log.

(b) The airworthiness release or log entry required by paragraph (a) of this section must—

(1) Be prepared in accordance with the procedures set forth in the air carrier's manual;

(2) Include a certification that—

(i) The work was performed in accordance with the requirements of the air carrier's manual;

(ii) All items required to be inspected were inspected by an authorized person who determined that the work was satisfactorily completed;

(iii) No known condition exists that would make the helicopter unairworthy; and

(iv) So far as the work performed is concerned, the helicopter is in condition for safe operation; and

(3) Be signed by an authorized certificated mechanic or repairman except that a certificated repairman may sign the release or entry only for the work for which he is employed and certificated.

Notwithstanding subparagraph (3) of this paragraph, after maintenance or alterations performed by a repair station certificated under the provisions of Subpart C of Part 145, the airworthiness release or log entry required by paragraph (a) of this section may be signed by a person authorized by that repair station.

(c) When an airworthiness release form is prepared the air carrier must give a copy to the pilot in command and must keep a record thereof for at least two months.

(d) Instead of restating each of the conditions of the certification required by paragraph (b) of this section, the air carrier may state in its manual that the signature of an authorized certificated mechanic or repairman constitutes that certification.

Special Federal Aviation Regulation 36

Operations Review Program Amendment No. 2A; Development of Major Repair Data

Adopted: January 17, 1978 **Effective: January 23, 1978**

(Published in 43 FR 3084, January 23, 1978)

SUMMARY: This amendment, being issued as a part of the FAA's Operations Review Program, adopts a new Special Federal Aviation Regulation (SFAR) that provides for the use of data for accomplishing major repairs that have been developed by repair stations, air carriers, air taxis, and commercial operators of large aircraft but which have not been specifically approved by the FAA. The SFAR will relieve affected certificate holders of the burden attendant to obtaining FAA-approval of major repair data on a case-by-case basis if certain requirements necessary in the interest of safety are met. The SFAR is also needed to develop information upon which to base a permanent rule change.

FOR FURTHER INFORMATION CONTACT:

Donald A. Schroeder, Safety Regulations Division, Flight Standards Service, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, D.C. 20591; telephone (202) 755-8716.

SUPPLEMENTARY INFORMATION:

BACKGROUND

The aviation industry in the United States and abroad has grown substantially during the last ten years. Paralleling its rapid growth and numerous technological advances are significant changes in the operating environment in which airmen, air agencies, and aircraft operators function.

To enable the FAA to become more responsive to the needs of the general public and the aviation community in fulfilling the agency's aviation safety responsibilities, the FAA issued Notice No. 75-9 (40 FR 8585; February 28, 1975), inviting all interested persons to submit proposals for consideration during the Operations Review Program.

In response to that invitation, the FAA received more than 5,000 individual comments contained in 123 submissions. Based on those comments and on the Compilation of Proposals, the FAA prepared a number of working documents for the Operations Review Conference held in Arlington, Virginia, on December 1-5, 1975. The FAA distributed those documents to each person who participated in the Operations Review Program and to all other interested persons who requested them.

The Operations Review Conference was attended by more than 600 persons. Various committees discussed all the scheduled agenda items during the conference. Summaries were given by the FAA Committee Chairman at the close of the discussions on each agenda item. Persons present were given the opportunity to correct those oral summaries. Those summaries were edited and combined with an attendee list for the conference and with transcripts of certain plenary session speeches and were distributed to all attendees and to all persons requesting them in accordance with a Notice of Availability (Notice No. 75-9A; 41 FR 9413; March 4, 1976).

This amendment deals with Proposal No. 882, concerning § 145.51, that was submitted by the Air Transport Association for the Operations Review Program and is being issued as a part of that program.

DISCUSSION OF AMENDMENT

Under § 145.51 of the Federal Aviation Regulations (FAR), repair stations are allowed to approve aircraft, airframes, aircraft engines, propellers, or appliances for return to service after maintenance, preventive maintenance, or alterations. However, in the case of major repairs or major alterations, the work must have been done in accordance with FAA-approved technical data. Similar requirements exist in § 127.140(b), which is applicable to air carriers utilizing helicopters, and in § 121.379(b) which is applicable to air carriers and commercial operators of large aircraft. In addition, under § 135.2, air taxi operators using large aircraft are subject to the requirements of § 121.379(b).

While FAA-approved major alteration data may be developed under the Designated Alteration Station (DAS) provisions of Subpart M of FAR Part 21, similar provisions do not exist under which FAA-approved major repair data can be developed by those certificate holders subject to the requirements of §§ 121.379, 127.140, and 145.51. Because of this, affected certificate holders have, in the past, been required to submit major repair data and supporting information to FAA Regional Offices on a case-by-case basis for approval. Due to the large number of major repairs being performed and the financial need to have damaged aircraft repaired and returned to service as quickly as possible, the requirement for applying for case-by-case approvals has proven to be especially burdensome to affected certificate holders. In this connection, the FAA has recently been receiving an increasing number of petitions for exemption from the provisions of §§ 121.379 and 145.51. Several exemptions have been issued, subject to a number of conditions and limitations, allowing air carriers and repair stations to utilize major repair data they have developed which have not been specifically FAA-approved. Based on the experience gained under these exemptions and in view of the increasing number of exemption requests, the FAA believes it appropriate to adopt an SFAR to provide similar relief to all affected certificate holders and to enable the FAA to obtain additional information that is needed to determine the course of action to be taken with respect to §§ 121.379(b), 127.140(b), and 145.51.

In general, the SFAR being adopted is based on the DAS provisions of FAR Part 21 and the conditions and limitations contained in the related exemptions which have been granted. The SFAR requires those desiring relief to have available qualified engineering personnel. The preparation of an FAA-approved procedure manual for the development of major repair data is also required. In addition, records relating to the major repair data developed and the products incorporating the major repairs are required to be kept. The FAA believes these requirements are necessary to ensure that an adequate level of safety is maintained.

As indicated, affected certificate holders have been subjected to a severe burden under the provisions of §§ 121.379(b), 127.140(b), and 145.51, and the FAA believes that under the currently existing circumstances immediate relief is necessary. However, unless major repair data are developed under a system with adequate safeguards, using the data for a repair could result in a serious hazard to safety with respect to any aircraft incorporating the repair. The SFAR being adopted will provide an alternate means of compliance that will assure an equivalent level of safety to the existing requirements. Because of this and since no additional burden will be placed on any person, it is found that notice and public procedure hereon are impracticable and unnecessary and that good cause exists for making the amendment effective in less than 30 days. Nevertheless, since the SFAR is being adopted without prior notice and public procedure and is intended as interim rule-making action to enable the FAA to obtain information upon which to base a permanent rule change, interested persons are invited to submit comments on the new SFAR. Comments should be mailed to the Rules Docket, AGC–24, Federal Aviation Administration, Washington, D.C. 20591 and should reference the SFAR number. The FAA will consider all comments received in connection with any subsequent rule-making action to be taken with respect to the SFAR, and, if found to be justified, the FAA will initiate rule-making action with respect to the SFAR prior to its specified termination date.

DRAFTING INFORMATION

The principal authors of this document are Mr. Eli Newberger, Flight Standards Service, and Mr. Samuel Podheresky, Office of the Chief Counsel.

THE AMENDMENT

Accordingly, Special Federal Aviation Regulation No. 36 is adopted effective January 23, 1978.

NOTE: The reporting and recordkeeping requirements contained herein have been approved by the Office of Management and Budget in accordance with the Federal Reports Act of 1942.

[Secs. 313(a), 601, 604, and 607, Federal Aviation Act of 1958, as amended (49 U.S.C. 1354(a), 1421, 1424, and 1427); Sec. 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c))]

The FAA has determined that this document does not contain a major proposal requiring preparation of an Economic Impact Statement under Executive Order 11821, as amended by Executive Order 11949, and OMB Circular A-107.

Special Federal Aviation Regulation 36-1

Operations Review Program Amendment No. 2B; Development of Major Repair Data

Adopted: January 18, 1980 **Effective: January 23, 1980**

(Published in 45 FR 5677, January 24, 1980)

SUMMARY: This amendment extends the effectivity of a current Special Federal Aviation Regulation (SFAR) which provides for the use of data for accomplishing major repairs that have been developed by repair stations, air carriers, air taxis, and commercial operators of large aircraft but which have not been specifically approved by the FAA.

FOR FURTHER INFORMATION CONTACT: Eli S. Newberger, Regulatory Projects Branch (AVS-24), Safety Regulations Staff, Associate Administrator for Aviation Standards, Federal Aviation Administration, 800 Independence Avenue, S.W., Washington, D.C. 20591, Telephone: (202) 755-8716.

SUPPLEMENTARY INFORMATION

SFAR 36, which became effective January 23, 1978, was issued to relieve qualifying certificated air carriers, operators, and repair stations of the burden of obtaining FAA approval of data developed by them for major repairs on a case-by-case basis. The certificate holders eligible for authorization under the SFAR are those employing adequately trained personnel and complying with specified procedural requirements.

SFAR 36 was adopted as an interim rulemaking action to obtain information upon which to base a permanent rule change. The termination date for SFAR 36 is January 23, 1980, and authorizations issued to date under SFAR 36 are effective for a period of 2 years.

At the time the termination date of SFAR 36 was established, it was anticipated that sufficient experience would be accumulated in 2 years and the termination date for SFAR 36 and each authorization issued under this SFAR was so established. However, most of the affected certificate holders did not utilize the provisions of this SFAR until recently and the FAA, therefore, does not currently have sufficient information upon which to base a permanent rule change. The reasons which justified the adoption of SFAR 36 still exist, and in order to gain the necessary experience it is in the public interest to extend the termination date of SFAR 36 from January 23, 1980, to January 23, 1982. So that previously authorized certificate holders will not be subjected to the unnecessary burden of requalifying upon expiration of the initial 2-year period, the amendment provides that each authorization issued under this SFAR has an effective period from the date of issuance until January 23, 1982. This rule extension should provide ample time for an effective evaluation of the need for, and provisions to be incorporated into, a permanent rule change.

Since this amendment continues in effect the provisions of a currently effective SFAR and imposes no additional burden on any person, I find that notice and public procedure hereon are unnecessary and it may be made effective in less than 30 days.

In consideration of the foregoing, effective January 23, 1980, Special Federal Aviation No. 36 is amended by changing the termination date from "January 23 1980" to "January 23, 1982", and by revising paragraph 5.

(Secs 313(a), 601, 604 and 607, Federal Aviation Act of 1958 as amended (49 U.S.C. 1354(a), 1421, 1424, and 1427); Sec. 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).)

NOTE.—The FAA has determined that this document involves a regulation which is not significant under Executive Order 12044, as implemented by DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979).

Special Federal Aviation Regulation 36-2
Development of Major Repair Data

Adopted: November 3, 1981 **Effective: January 23, 1982**

(Published in 46 FR 58651, December 3, 1981)

SUMMARY: This amendment extends the effectivity of Special Federal Aviation Regulation (SFAR) No. 36 which provides that repair stations, air carriers, air taxis, and commercial operators of large aircraft may accomplish major repairs using self-developed repair data which have not been specifically approved by the FAA.

FOR FURTHER INFORMATION CONTACT: Joseph A. Sirkis, Regulatory Projects Branch (AVS-24), Safety Regulations Staff, Associate Administrator for Aviation Standards, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, D.C. 20591, Telephone: (202) 755-8716.

SUPPLEMENTARY INFORMATION: SFAR 36, which became effective January 23, 1978, was issued to relieve qualifying certificated air carriers, operators, and repair stations of the burden of obtaining FAA approval of data developed by them for major repairs on a case-by-case basis. The certificate holders eligible for authorization under the SFAR are those employing adequately trained personnel and complying with specified procedural requirements.

SFAR 36 was adopted as an interim rulemaking action to obtain information upon which to base a permanent rule change. However, most of the affected certificate holders did not utilize the provisions of SFAR 36 until it was well into its second year and near its expiration date of January 23, 1980. Since the FAA did not have sufficient data upon which to base a permanent rule change, the termination date for SFAR 36 was extended an additional 2 years. The termination date for SFAR 36 is January 23, 1982, and authorizations issued to date under SFAR 36 are effective for a period of 2 years.

The FAA will initiate rulemaking to make the authorization issued under SFAR 36 a permanent part of the Federal Aviation Regulations. The reasons which justified the adoption of SFAR 36 still exist, and in order to allow time for completion of the permanent rule change, it is in the public interest to extend the termination date of SFAR 36 from January 23, 1982, to January 23, 1984. So that previously authorized certificate holders will not be subjected to the unnecessary burden of requalifying upon expiration of the initial 2-year period, the amendment provides that each authorization issued under this SFAR has an effective period from the date of issuance until January 23, 1984. This rule extension should provide ample time for provisions to be incorporated into a permanent rule change.

Since this amendment continues in effect the provisions of a currently effective SFAR and imposes no additional burden on any person, I find that notice and public procedures hereon are unnecessary, and the amendment may be made effective in less than 30 days.

In consideration of the foregoing, effective January 23, 1980, Special Federal Aviation Regulation No. 36 is amended by changing the termination date from "January 23, 1982" to "January 23, 1984", and by revising paragraph 5.

(Secs. 313(a), 601, 604 and 607, Federal Aviation Act of 1958 as amended (49 U.S.C. 1354(a), 1421, 1424, and 1427); Sec. 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).)

NOTE.—The FAA has determined that this document involves a rule change which is relaxatory in nature and imposes no additional burden on any person. Accordingly, it has been determined that: the rule change does not involve a major change under Executive Order 12291; it is not significant under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and its anticipated impact is so minimal that an evaluation is not required.

Special Federal Aviation Regulation 36-3
Development of Major Repair Data
Adopted: January 6, 1984 Effective: January 31, 1984

(Published in 49 FR 4354, February 3, 1984)

SUMMARY: This amendment extends the effectivity of Special Federal Aviation Regulation (SFAR) No. 36, which provides that repair stations, air carriers, air taxis, and commercial operators of large aircraft may accomplish major repairs using self-developed repair data which have not been specifically approved by the FAA. In addition, the regulation will continue to provide relief for persons from the burden of obtaining FAA approval of repair data on a case-by-case basis and allow time for the FAA to incorporate the SFAR provisions into the regulations.

Comments must be received on or before April 3, 1984.

ADDRESSES: Send comments on the rule in duplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attn: Rules Docket (AGC-204), Docket No. 17551, 800 Independence Avenue, SW., Washington, D.C. 20591, or deliver comments in duplicate to: FAA Rules Docket, Room 916, 800 Independence Avenue, SW., Washington, D.C. Comments may be examined in the Rules Docket weekdays, except Federal holidays, between 8:30 a.m. and 5 p.m.

FOR FURTHER INFORMATION CONTACT:

Angelo R. Mastrullo, General Aviation and Commercial Branch, AWS-340, Aircraft Maintenance Division, Office of Airworthiness, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, D.C. 20591, Telephone (202) 426-8203.

SUPPLEMENTAL INFORMATION:

Background

SFAR 36, which became effective on January 23, 1978, was issued to relieve qualifying certificated air carriers, air taxis, commercial operators, and repair stations of the burden of obtaining FAA approval of data developed by them for major repairs on a case-by-case basis. The certificate holders eligible for authorization under the SFAR are those employing adequately trained personnel and complying with specified procedural requirements.

SFAR 36 was adopted as an interim rulemaking action to obtain information upon which to base a permanent rule change. However, most of the affected certificate holders did not realize the provisions of SFAR 36 until it was well into its second year and near its expiration date of January 23, 1980. Since the FAA did not have sufficient data upon

which to base a permanent rule change, the termination date for SFAR 36 was extended an additional 2 years, to January 23, 1982.

The FAA initiated rulemaking to consolidate certain authorizations along with those issued under SFAR 36 and make them a permanent part of the Federal Aviation Regulations. However, this rulemaking action was not completed and the termination date for SFAR 36 was extended for an additional 2 years, to January 23, 1984. Each authorization issued under this SFAR was made effective from the date of issuance until January 23, 1984. There are presently more than 20 certificated air carriers and repair stations holding SFAR 36 authorizations. For reasons unrelated to the subject matter of SFAR 36, the rulemaking project that had been continuing was canceled, and no new project is presently being developed. Consequently, to provide continuity and avoid hardship to those relying on SFAR 36 as it presently exists, the FAA finds it necessary to extend the effectivity of SFAR 36 for an additional 5 years, to January 23, 1989.

Paperwork Reduction Act

Information collection requirements in this regulation (SFAR 36) have been approved by the Office of Management and Budget under the provisions of the Paperwork Reduction Act of 1980 (P.L. 96-511) and have been assigned OMB Control Number 2120-0507.

Good Cause Justification for Immediate Adoption

The termination date for SFAR 36 and the authorizations issued under SFAR 36 is January 23, 1984. The reasons which justified the adoption of SFAR 36 still exist; and to avoid hardship to those relying on the provisions of SFAR 36, it is in the public interest to extend the termination date of SFAR 36 from January 23, 1984, to January 23, 1989. So that previously authorized certificate holders will not be subjected to the unnecessary burden of requalifying upon expiration of the initial 2-year period, the amendment provides that each authorization issued under this SFAR has an effective period from the date of issuance until January 23, 1989. This rule extension should provide ample time for provisions to be incorporated into a permanent rule change.

Since this amendment continues in effect the provisions of a currently effective SFAR and imposes no additional burden on any person, I find that notice and public procedures hereon are unnecessary, and the amendment may be made effective in less than 30 days. However, interested persons are invited to submit such comments as they may desire regarding this amendment. Communications should identify the docket number and be submitted in duplicate to the address specified above. All communications received on or before April 3, 1984, will be considered by the Administrator, and this amendment may be changed in light of the comments received. All comments received will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested parties.

ADOPTION OF THE AMENDMENT

In consideration of the following, the Federal Aviation Regulations are amended effective January 31, 1984.

(Sections 313(a), 604 and 607, Federal Aviation Act of 1958 as amended (49 U.S.C. 1354(a), 1421, 1424, and 1427); 49 U.S.C. 106(g) (Revised Public Law 97-449, January 12, 1983)

NOTE: The FAA has determined that this document involves a rule change which imposes no additional burden on any person. Accordingly, it has been determined that: the rule change does not involve a major action under Executive Order 12291; it is not significant under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and its anticipated impact is so minimal that an evaluation is not required.

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Special Federal Aviation Regulation 36-4

Development of Major Repair Data

Adopted: November 28, 1988 **Effective: January 23, 1989**

(Published in 53 FR 49522, December 7, 1988)

SUMMARY: This amendment extends the effective date of Special Federal Aviation Regulation (SFAR) No. 36 which provides that repair stations, air carriers, air taxis, and commercial operators of large aircraft may accomplish major repairs using self-developed repair data which have not been specifically approved by the FAA. In addition, the regulation will continue to provide an alternative from the need to obtain FAA approval of repair data on a case-by-case basis and allow additional time for the FAA to incorporate the SFAR provisions into the regulations.

ADDRESS: Comments on this rule may be mailed, in triplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attention: Rules Docket (AGC-10), Docket No. 17551, 800 Independence Ave., SW., Washington DC 20591. Comments delivered must be marked Docket No. 17551. Comments may be examined in Room 915G weekdays between 8:30 a.m. and 5:00 p.m., except on Federal holidays.

FOR FURTHER INFORMATION CONTACT: Jess Lewis, Continued Airworthiness Staff, Aircraft Engineering Division, AWS-100, Office of Airworthiness, Federal Aviation Administration, 800 Independence Ave., SW., Washington D.C. 20591, telephone: (202) 267-9287.

SUPPLEMENTARY INFORMATION:

Background

SFAR 36, which became effective on January 23, 1978, was issued to provide qualifying certificated air carriers, air taxis, commercial operators, and repair stations with an alternative to the need to obtain FAA approval of data developed by them for major repairs on a case-by-case basis. The certificate holders eligible for authorization under the SFAR are those employing adequately trained personnel and complying with specified procedural requirements.

SFAR 36 was adopted as an interim rulemaking action to obtain information upon which to base a permanent rule change. However, most of the affected certificate holders did not utilize the provisions of SFAR 36 until it was well into its second year and near its expiration date of January 23, 1980. Since the FAA did not have sufficient data upon which to base a permanent rule change, the termination date for SFAR 36 was extended an additional 2 years, to January 23, 1982.

Although the FAA initiated rulemaking to consolidate certain authorizations along with those issued under SFAR 36 and make them a permanent part of the Federal Aviation Regulations (FAR) the rulemaking action was not completed and the termination date for SFAR 36 was extended two additional periods. The first period was for 2 years and the second period, with a termination date of January 23, 1989, was for 5 years. Each authorization issued under the SFAR was made effective from the date of issuance. There are presently more than 30 certificated air carriers and repair stations holding SFAR 36 authorizations. For reasons unrelated to the subject matter of SFAR 36, the rulemaking project that was to permanently codify SFAR 36 was canceled. A new regulatory project which will codify the provisions of SFAR 36 into FAR 21 (14 CFR Part 21) is underway. This new project broadens existing delegation of aircraft certification and approval functions and extends these functions to domestic organizations which possess the necessary technical and managerial qualifications. These changes are beyond the scope of SFAR 36 and are likely to stimulate significant interest and comment. This will prevent codification before SFAR 36 expires. Consequently, to provide continuity and avoid hardships to those relying on SFAR 36 as it presently exists, the FAA finds it necessary to extend the effective date of SFAR 36 an additional 5 years, to January 23, 1994.

Paperwork Reduction Act

Information collection requirements in this regulation [SFAR 36] have been approved by the Office of Management and Budget under the provisions of the Paperwork Reduction Act of 1980 (Pub. L. 96-511) and have been assigned OMB Control Number 2120-0507.

Good Cause Justification for Immediate Adoption

The termination date for SFAR 36 and the authorizations issued thereunder is January 23, 1989. The reasons which supported the adoption of SFAR 36 still exist and, to avoid hardships to those relying on the provisions of SFAR 36, it is in the public interest to extend the termination date of SFAR 36 from January 23, 1989, to January 23, 1994. The amendment also extends the effective date of each current authorization issued under this SFAR from the date of issuance until January 23, 1994. This rule extension should provide ample time for provisions to be incorporated into a permanent rule change.

This amendment is necessary to provide regulatory continuity and avoid hardship and costs to those relying on SFAR 36 as it presently exists. Since this amendment continues in effect the provisions of a currently effective SFAR and imposes no additional burden on any person, we find that notice and public procedures hereon are unnecessary. However, interested persons are invited to submit such comments as they may desire regarding this amendment. Communications should identify the docket number and be submitted in triplicate to the address specified above. All communications received on or before the closing date for comments will be considered by the Administrator, and this amendment may be changed in light of the comments received. All comments received will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested parties.

Federalism Implications

The regulations adopted herein will not have substantial direct effects on the states, on the relationship between the national government and the states, or the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule will not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Conclusion

The FAA has determined that this document involves a rule change which imposes no additional burden on any person. The FAA certifies that this amendment will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. Accordingly, it has been determined that: the rule change does not involve a major action under Executive Order 12291, it is not significant under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and its anticipated impact is so minimal that a full regulatory evaluation is not required.

Adoption of the Amendment

In consideration of the foregoing, the Federal Aviation Administration amends Parts 121, 127, 135, and 145 (14 CFR Parts 121, 127, 135, and 145) effective January 23, 1989:

The authority citation for Part 127 continues to read as follows:

Authority: 49 U.S.C. 1354(a), 1421, 1422, 1423, 1424, 1425, 1430; 49 U.S.C. 106(g) (Revised, Pub. L. 97-449, January 12, 1983).

Special Federal Aviation Regulation 36-5

Organizational Changes and Delegations of Authority

Adopted: September 15, 1989 **Effective: October 25, 1989**

(Published in 54 FR 39288, September 25, 1989)

SUMMARY: This amendment adopts changes to office titles and certain terminology in the regulations that were affected by a recent agencywide reorganization. These changes are being made to reflect delegations of authority that were changed, as well as offices that were renamed or abolished and replaced with new office designations. These changes are necessary to make the regulations consistent with the current agency structure.

FOR FURTHER INFORMATION CONTACT: Jean Casciano, Office of Rulemaking (ARM-1), Federal Aviation Administration, 800 Independence Ave., SW., Washington, DC 20591; Telephone (202) 267-9683.

SUPPLEMENTARY INFORMATION

Background

On July 1, 1988, the FAA underwent a far-reaching reorganization that affected both headquarters and regional offices. The most significant change is that certain Regional Divisions and Offices, which formerly reported to the Regional Director, are now under "straight line" authority, meaning that these units within each Regional Office report to the appropriate Associate Administrator (or Chief Counsel) in charge of the function performed by that unit.

Within Part 11 of the Federal Aviation Regulations (FAR), various elements of the FAA have been delegated rulemaking authority by the Administrator. These delegations need to be updated. In addition, throughout the Federal Aviation Regulations references are made to offices that have been renamed or are no longer in existence as a result of reorganization.

Title 14 of the Code of Federal Regulations must therefore be amended to reflect the reorganizations and changes that have taken place.

Paperwork Reduction Act

The paperwork requirements in sections being amended by this document have already been approved. There will be no increase or decrease in paperwork requirements as a result of these amendments, since the changes are completely editorial in nature.

Good Cause Justification for Immediate Adoption

This amendment is needed to avoid possible confusion about the FAA reorganization and to hasten the effective implementation of the reorganization. In view of the need to expedite these changes, and because the amendment is editorial in nature and would impose no additional burden on the public, I find that notice and opportunity for public comment before adopting this amendment is unnecessary.

Federalism Implications

The regulations adopted herein will not have substantial direct effects on the states, on the relationship between the National government and the states, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Conclusion

The FAA has determined that this document involves an amendment that imposes no additional burden on any person. Accordingly, it has been determined that: The action does not involve a major rule under Executive Order 12291; it is not significant under DOT Regulatory Policies and Procedures

(44 FR 11034; February 26, 1979); and because it is of editorial nature, no impact is expected to result and a full regulatory evaluation is not required. In addition, the FAA certifies that this amendment will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

THE RULE

In consideration of the foregoing, the Federal Aviation Administration amends the Federal Aviation Regulations (14 CFR Chapter I) effective October 25, 1989.

The authority citation for Part 127 is revised to read as follows:

Authority: 49 U.S.C. 1354(a), 1421, 1422, 1423, 1424, 1425, 1430; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983).

Special Federal Aviation Regulation 36

Operations Review Program Amendment No. 2A; Development of Major Repair Data

1. *General.* Contrary provisions of §§ 121.379(b), 127.140(b) and 145.51 of the Federal Aviation Regulations notwithstanding, a certificate holder may approve an aircraft, airframe, aircraft engine, propeller, or appliance for return to service after accomplishing a major repair if the data used for the repair was developed by that certificate holder in accordance with an authorization issued under this Special Federal Aviation Regulation.

2. *Application.* The applicant for an authorization to develop and use its own technical data for major repairs must submit an application, in writing and signed by an officer of the applicant, to the FAA [Flight Standards District Office] for the region in which the applicant is located. The application must contain—

(a) The repair station certificate number held by the repair station applicant, the current ratings covered by the certificate, and a copy of the repair station's operations specifications;

(b) The air carrier, air taxi, or commercial operator operating certificate number held by the air carrier, air taxi, or commercial operator applicant, and the products that it may maintain under the certificate;

(c) The names, signatures, and titles of the persons for whom authorization to approve the use of technical data for major repairs is requested; and

(d) A description of the applicant's staff with which compliance with section 3 of this Special Federal Aviation Regulation is to be shown.

3. *Eligibility.*

(a) To be eligible for an authorization to develop its own technical data for major repairs, the applicant must—

(1) Hold a current domestic repair station certificate under Part 145, an air carrier certificate under Part 121 or 127, or a commercial operator certificate under Part 121, or be an air taxi operator subject to the requirements of § 135.2;

(2) Have adequate personnel, in the United States, appropriate to the products that it may maintain under its certificate; and

(3) Employ, or have available, a staff of engineering personnel who can determine compliance with the applicable airworthiness requirements of the Federal Aviation Regulations.

(b) At least one member of the staff required by paragraph (a)(3) of this section must have all of the following qualifications:

(1) A thorough working knowledge of the applicable requirements of the Federal Aviation Regulations.

(2) A position, on the applicant's staff, with authority to establish repair programs that ensure that repaired products meet the applicable requirements of the Federal Aviation Regulations.

(3) At least one year of satisfactory experience in direct contact with the FAA while processing engineering work for type certification or major repair projects.

(4) At least eight years of aeronautical engineering experience (which may include the one year required by paragraph (b) (3) of this section).

4. *Procedure Manual.*

(a) No person holding an authorization issued under this Special Federal Aviation Regulation may exercise any authority under the authorization unless he obtains FAA approval of and complies with a procedure manual containing—

(1) The procedures for developing and determining the adequacy of technical data for major repairs; and

(2) The names, signatures, and responsibilities of officials and of each staff member required by section 3 of this Special Federal Aviation Regulation, identifying those persons who—

(i) Have authority to make changes in procedures that require a revision to the procedure manual; and

(ii) Are to prepare or determine the adequacy of technical data, or both, plan or conduct tests, and approve the results of tests.

(b) No person holding an authorization issued under this Special Federal Aviation Regulation may continue to perform any authorized function affected by any change in staff necessary to continue to meet the requirements of section 3 of this Special Federal Aviation Regulation, or affected by any change in procedures from those approved under paragraph (a) of this section, unless that change is FAA-approved and entered in the manual. For this purpose, the manual must contain a "log-of-revisions" page with space for the identification of each revised item, page, date, and the signature of the person approving the change for the Administrator.

[5. *Duration of Authorization.* Each authorization issued under this Special Federal Aviation Regulations is effective from the date of issuance until January 23, 1994, unless it is surrendered or the Administrator suspends, revokes, or otherwise terminates it at an earlier date.]

6. *Maintenance of Eligibility.* Each holder of an authorization issued under this Special Federal Aviation Regulation shall continue to meet the requirements for issue of the authorization or shall notify the Administrator within 48 hours of any change (including a change of personnel) that could affect the ability of the holder to meet those requirements.

7. *Transferability.* An authorization issued under this Special Federal Aviation Regulation is not transferable.

8. *Inspections.* Upon request, each holder of an authorization issued under this Special Federal Aviation Regulation and each applicant for an authorization shall let the Administrator inspect his facilities, products, and records.

9. *Limits of Applicability.*

(a) An authorization issued under this Special Federal Aviation Regulation applies only to products—

(1) Covered by the rating of the repair station applicant and its operations specifications; and

(2) Covered by the operating certificate and maintenance manual of the air carrier, air taxi, or commercial operator applicant.

(b) Each holder of an authorization issued under this Special Federal Aviation Regulation must comply with any additional limitations prescribed by the Administrator and made a part of the authorization.

10. *Data Review and Service Experience.*

(a) If the Administrator finds that a product for which repair data was developed under this Special Federal Aviation Regulation does not meet the applicable airworthiness requirements, or that an unsafe feature or characteristic caused by a defective repair exists, the holder of the authorization, upon notification by the Administrator, shall investigate the matter and report to the Administrator the results of the investigation and the action, if any, taken or proposed.

(b) If corrective action by the user of the product is necessary for safety because of any noncompliance or defect specified in paragraph (a) of this section, the holder of the authorization shall submit the information necessary for the issuance of an airworthiness directive under Part 39 of the Federal Aviation Regulations.

11. *Current Records.*

(a) Each holder of an authorization issued under this Special Federal Aviation Regulation shall maintain, at its facility, current records containing—

(1) For each product for which it has developed and used major repair data, a technical data file that includes any data and amendments thereto (including drawings, photographs, specifications, instructions, and reports) necessary for the major repair;

(2) A list of products by make, model, manufacturer's serial number and, if applicable, any FAA identification, that have been repaired under the authorization; and

(3) A file of information from all available sources on difficulties of products repaired under the authorization.

(b) The records prescribed in paragraph (a) of this section shall be—

(1) Made available by the holder of the authorization, for examination, upon the Administrator's request; and

(2) In the case of the data file prescribed in paragraph (a)(1) of this section, identified by the holder of the authorization and sent to the Administrator as soon as the holder of the authorization no longer utilizes it.

This Special Federal Aviation Regulation terminates [January 23, 1994.]

Special Federal Aviation Regulation 38
Certificate Requirements: General
Adopted: December 12, 1978 Effective: December 14, 1978

(Published in 43 FR 58366, December 14, 1978)

SUMMARY: In response to the Airline Deregulation Act of 1978 (P.L. 95–504) and recent actions by the Civil Aeronautics Board, this Special Federal Aviation Regulation (SFAR) simplifies the certificate issuance procedures for air carriers and other operators engaged in air commerce. The FAA is hereby providing for the issuance of (1) an FAA air carrier operating certificate to each air carrier, as defined in the Federal Aviation Act of 1958, as amended, which will cover all operations that operator conducts under Parts 121, 127, and 135 of the Federal Aviation Regulations (FARs), and (2) an FAA operating certificate to any operator who is not an air carrier which will cover all non-air carrier operations conducted by that operator under Parts 121, 123, and 135 of the FARs. Under this SFAR, only one operating certificate will be issued to an air carrier. Each type of operation an air carrier is authorized to conduct and the regulations applicable to each type operation will be specified in the air carrier's operations specifications. The impart of this SFAR is to eliminate both an immediate and future unnecessary burden on attached aircraft operations.

FOR FURTHER INFORMATION CONTACT:

Mr. Raymond E. Ramakis, Regulatory Projects Branch, Safety Regulation Division, Flight Standards Service, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, D.C. 20591, telephone (202) 755–8716.

SUPPLEMENTARY INFORMATION:

BACKGROUND

The Federal Aviation Regulations were designed for the issuance of one FAA operating certificate to each air carrier based on the type of operations it conducted. This regulatory plan was consistent with the economic regulations of the Civil Aeronautics Board and has worked well in the past with respect to air carrier operations conducted under certificates of public convenience and necessity or other appropriate economic authority issued by the CAB. However, the initiation by the CAB of a liberalization of its policy and regulations concerning the grant of economic authority and route authorizations together with the congressional establishment of all-cargo air services authority and the implementation of the Airline Deregulation Act of 1978 has resulted in the issuance of multiple CAB certificates, exemptions and authority authorizations with individual air carriers being granted CAB authority to conduct a variety of operations. In some cases, operators have received authority to conduct operations both as an air taxi and as an all-cargo air carrier. In other cases, domestic and flag air carriers have been granted authority to also engage in all-cargo air service operations and/or air taxi operations and some supplemental air carriers have received authority to provide scheduled domestic and/or flag service.

An operator who receives CAB authority to perform a new type of service must also apply for an FAA operating certificate and/or operations specifications. Since different Parts of the FARs are applicable to the different types of operations and each Part contains its own certification and operating rules, the issuance of multiple FAA certificates has led to duplication of requirements, unnecessary paperwork, and confusion. Moreover, the authorization of the additional authority may require the grant of exemptions from mutually exclusive requirements of the different parts. Pending a detailed review and amendment of the Federal Aviation Regulations, the FAA is adopting this Special Federal Aviation Regulation to simplify the certificate issuance procedures and eliminate the undue administrative burden the current procedural requirements place on affected operators and FAA field offices.

Under the SFAR, each air carrier, as defined under the Federal Aviation Act of 1958, as amended, will be issued an FAA air carrier operating certificate which will cover all

operations that operator conducts under Parts 121, 127, and 135 of the Federal Aviation Regulations. Non-air carriers conducting operations under Parts 121, 123, and 135 will be issued an FAA operating certificate. The specific types of operation authorized under a certificate and the certification and operating rules applicable to each type of operation will be specified in the operator's operations specifications. The holder of an "Air Carrier Operating Certificate" may be authorized to conduct under that certificate any of the following air carrier or non-air carrier operations specified in the current FARs. except operations under Part 123 which is applicable only to air travel clubs. The holder of an "Operating Certificate" will be limited to either those operations specified in the current regulations noted below for commercial operations or those specified for an air travel club.

Air Carrier Operating Certificate:

Domestic Air Carrier Operations	Part 121
Flag Air Carrier Operations	Part 121
Supplemental Air Carrier Operations	Part 121
All-Cargo Air Service Operations	Part 121
Scheduled Helicopter Operations	Part 127
Air Taxi Operations—Small and Certain Large Aircraft	Part 135

Operating Certificate:

Commercial Operations—Large Aircraft	Part 121
Commercial Operations—Small and Certain Large Aircraft	Part 135
Air Travel Club Operations Using Large Airplanes	Part 123

Although the certificate is no longer identified with a particular type of operation (e.g., domestic air carrier, air taxi operator, etc.), or with a specific Part of the Federal Aviation Regulations (e.g., Part 121 certificate holder, Part 135 certificate holder, etc.), the types of operations authorized will be identified in the operations specifications; and, the regulations applicable to each type of operation will be specified from the currently applicable regulations.

The operations specifications will be issued based on the type of aircraft the operator intends to use in the conduct of its operations. For example, an air carrier operating aircraft having a maximum passenger seating configuration, excluding any pilot seat, of 30 seats or less, and a maximum payload capacity of 7,500 pounds or less will be issued operations specifications under the provisions of Revised Part 135, effective December 1, 1978, (43 FR 46742, October 10, 1978) applicable to commuter and air taxi operations. However, in accordance with the grandfather provisions of § 135.2(d), the holder of a current air taxi operator's certificate who, on December 1, 1978, conducted its operations in those aircraft under the rules of Part 121 applicable to domestic or supplemental air carriers may elect to continue to operate those aircraft under operations specifications issued under the provisions of Part 121. Air carriers operating larger aircraft will be issued operations specifications under the provisions of Part 121. It should be noted that, depending on the type of aircraft used, an air carrier's operations specifications may include those issued under Parts 121, 127, and 135. This is consistent with the current pass-through provisions of §§ 121.9 and 135.2. Section 121.9 requires the holder of a "Part 121" certificate who conducts any operations in small and certain large airplanes to conduct those operations under the requirements of Part 135 applicable to air taxi operators. Likewise, § 135.2 requires the holder of a "Part 135" air taxi certificate who conducts any operations in certain large airplanes to conduct those operations under the applicable requirements of Part 121.

No change in the substantive requirements applicable to the aircraft listed in the operation specifications of operators who currently hold certificates is made by this SFAR. All certificate holders will continue to comply with the provisions and limitations under which they are certificated and/or operating with respect to the type of aircraft listed in their current operation specifications.

In order to provide for the orderly transition and consolidation of the multiple certificates held by some operators, the FAA operating certificates held by each operator will continue to be valid until such time as an operating certificate is issued to that operator under this SFAR. Present certificate holders need not apply

for the new certificates which may be issued to them in connection with applications for certificate renewals and changes in their operating authority and authorizations which require amendments to their operating certificates or operations specifications. In any event, all operators will be issued the new certificates by June 30, 1980. In this connection it should also be noted that a certificate number presently held by an operator may be transferred to the new certificate if the operator wants to retain the number.

NEED FOR IMMEDIATE ACTION

In order that air carriers issued authority by the CAB pursuant to certain provisions of the Airline Deregulation Act of 1978 may commence service pursuant to such authority within the time required by that Act, and since this special SFAR is administrative in nature and relieves an unnecessary burden on the FAA and applicants for operating certificates and changes to those certificates, I find that notice and public procedure are impracticable and contrary to the public interest and that good cause exists for making this amendment effective in less than 30 days. However, the FAA intends to review the certification procedure experience under this SFAR and interested persons are invited to participate in this process by submitting such written data, views, or arguments as they may desire regarding this SFAR. Communications should identify the docket number and be submitted in duplicate to the Federal Aviation Administration, Office of the Chief Counsel, Attention: Rules Docket, AGC-24, 800 Independence Avenue, S.W., Washington, D.C. 20591. All communications received on or before January 31, 1979, will be considered by the Administrator and this SFAR may be changed in the light of the comments received. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons.

THE AMENDMENT

Accordingly, Special Federal Aviation Regulation No. 38 is adopted, effective December 14, 1978.

(Secs. 313(a), 601, and 604 of the Federal Aviation Act of 1958 (49 U.S.C. Sections 1354(a), 1421 and 1424); and Sec. 6(c) of the Department of Transportation Act (49 U.S.C. Section 1655(c)).)

NOTE– The FAA has determined that this document is not significant under the procedures and criteria prescribed by Executive Order 12044 and as implemented by interim Department of Transportation guidelines (43 FR 9582; March 8, 1978).

Special Federal Aviation Regulation 38-1
Certificate Requirements: General
Adopted: December 27, 1984 **Effective: January 1, 1985**

(Published in 50 FR 450, January 4, 1985)

SUMMARY: This amendment extends the effectiveness of Special Federal Aviation (SFAR) No. 38. In 1978, the FAA promulgated SFAR 38 as an interim regulation to address regulatory questions arising from legislation that resulted in economic deregulation of the air transportation industry and from the Civil Aeronautics Board's (CAB) scheduled demise (or "sunset") on December 31, 1984. Having generally reviewed the FAA regulations to determine the most appropriate regulatory response to the Airline Deregulation Act of 1978 and the termination of CAB functions attendant on the CAB sunset, the FAA concludes that it is appropriate to extend the termination date of SFAR 38 to allow time for the FAA, in separate rulemaking, to propose and receive comments on certain revisions to present SFAR 38.

The termination date for SFAR 38 is extended to June 1, 1985. Comments must be received on or before March 5, 1985.

ADDRESSES: Send comments on the rule in duplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attn: Rules Docket (AGC-204), Docket No. 18510, 800 Independence Avenue, S.W., Washington, D.C. 20591, or deliver comments in duplicate to: FAA Rules Docket, Room 915G, 800 Independence Avenue, S.W., Washington, D.C. Comments may be examined in the Rules Docket weekdays, except Federal holidays, between 8:30 a.m. and 5 p.m.

FOR FURTHER INFORMATION CONTACT:

Mr. David Catey, Project Development Branch, Air Transportation Division, Office of Flight Operations, Federal Aviation Administration, 800 Independence Avenue, S.W., Washington, D.C. 20591: Telephone (202) 427-4621.

SUPPLEMENTARY INFORMATION:

BACKGROUND

On December 12, 1978, the FAA promulgated SFAR 38 in consequence of the Airline Deregulation Act of 1978 (Pub. L. 95-304, 33 U.S.C. 857-14). That Act embodies the Congressional intent that the Federal Government diminish its involvement in regulating the economic aspects of the airline industry. To accomplish this, Congress directed that the Civil Aeronautics Board (CAB) be abolished, and in anticipating its sunset, the CAB curtailed or suspended much of its regulatory activity. On October 4, 1984, additional legislation was enacted further defining the process for CAB sunset.

Because some aspects of FAA safety regulation rest upon CAB definitions and authority, the FAA found it necessary in 1978 to adopt an interim measure to provide for an orderly transition from CAB and FAA interlocking authority, to a regulatory regime with no CAB in existence. SFAR 38 set out FAA certification and operating requirements applicable to all "air commerce" and "air transportation" operations for "compensation or hire" (SFAR 38 does not address Part 133 External Load Operations, Part 137 Agriculture Aircraft Operations, or Part 91 training and other special purpose operations.) The FAA has reviewed SFAR 38 and has concluded that it should be revised and clarified and that its effectiveness should be continued until at least May 1, 1986, to give the FAA time to review all of its regulations in a post-CAB sunset light. A proposed revision of SFAR 38 will soon be published for public comment in the Federal Register. This amendment merely extends the termination date of SFAR 38 to June 1, 1985, to allow adequate time for receipt and consideration of public comment on the proposed revisions to present SFAR 38 which are being undertaken in separate rulemaking.

Good Cause Justification for Immediate Adoption

The termination date for SFAR 38, and for the operating certificates issued under SFAR 38, is January 1, 1985. The reasons which justified the adoption of SFAR 38 still exist. Therefore, it is in the public interest to extend the termination date of SFAR 38 from January 1, 1985, to June 1, 1985. This action is necessary to permit continued operations under operating certificates issued under SFAR 38 and to avoid confusion in the administration of FAA regulations regarding operating certificates and operating requirements.

In addition, since this amendment continues in effect the provisions of a currently effective SFAR and imposes no additional burden on any person, I find that notice and public procedures hereon are unnecessary, impracticable, and contrary to the public interest, and that the amendment may be made effective in less than 30 days. However, interested persons are invited to submit such comments as they may desire regarding this amendment. Communications should identify the docket number and be submitted in duplicate to the address specified above. All communications received on or before the close of the comment period will be considered by the Administrator and this amendment may be changes in light of the comments received. All comments will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested parties.

Trade Impact Statement

The FAA finds that this amendment will have no impact on international trade.

Regulatory Flexibility Determination

The FAA finds that the amendment will have no significant economic impact on small entities.

The FAA has determined that this document involves a rule change which imposes no additional burden on any person. Accordingly, it has been determined that: the rule change does not involve a major rule under Executive Order 12291; it is not significant under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and its anticipated impact is so minimal that full regulatory evaluation is not required.

Adoption of the Amendment

In consideration of the foregoing, Parts 121, 127 and 135 of the Federal Aviation Regulations are amended effective January 1, 1985.

By amending Special Federal Aviation Regulation No. 38 in 14 CFR Parts 121, 127, and 135, to change the termination date from "January 1, 1985," to "June 1, 1985."

(Secs. 313, 601, 603 and 1102, Federal Aviation Act of 1958 as amended (49 U.S.C. 1354, 1421, 1423, 1424, and 1502); 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983)).

Special Federal Aviation Regulation 38-2
Certification and Operating Requirements

Adopted: May 28, 1985 **Effective: June 4, 1985**

(Published in 50 FR 23941, June 7, 1985)

SUMMARY: These amendments: (1) Specify and clarify the type of certificate and operations specifications an operator may be issued consistent with the scope and type of its operations; (2) specify and clarify the certification requirements the operator must meet with respect to each type of operation in order to be eligible to have a specified type of operation authorized in its operations specifications; (3) clarify the regulations with which an operator must comply in the conduct of the operations specified; (4) include provisions regarding Part 125 and other regulations which have been promulgated since the adoption of Special Federal Aviation Regulation (SFAR) No. 38 and eliminate provisions that relate to Part 123 and other regulations that are no longer applicable; (5) authorize certain operators of transport category airplanes having a maximum passenger seating configuration, excluding any required crewmember seat, of 30 seats or less and a maximum payload capacity of 7,500 pounds or less to operate under the provisions of Part 121 rather than Part 135 when a specific authorization is obtained from the Administrator (the related "pass-through" provision of SFAR 38 is deleted); (6) require rotorcraft operations that may currently be subject to Parts 121 and 127 to be conducted under Part 135; and (7) include the substance of present Part 129 applicability in order to provide a comprehensive listing of certification and operations specifications requirements.

FOR FURTHER INFORMATION CONTACT: Mr. Larry Bedore, Project Development Branch, Air Transportation Division, Office of Flight Operations, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, D.C. 20591, telephone (202) 472-4621.

SUPPLEMENTARY INFORMATION:

Background

On January 30, 1985, the FAA issued Notice of Proposed Rulemaking (NPRM) No. 85-3 (50 FR 4472). This Notice proposed to revise SFAR 38 primarily to specify and clarify FAA requirements for operating certificates and for operations specifications for persons who operate under Federal Aviation Regulations Parts 121 and 135. The Notice was issued to bring SFAR 38 up to date in view of changes in the regulations and in the aviation industry that had occurred since it was issued in 1978 and also as part of the FAA's continuing response to the sunset of the Civil Aeronautics Board.

This amendment updates SFAR 38 in light of changes since 1978 and clarifies those provisions in SFAR 38 that state which FAA regulations apply to a particular air carrier for the type of operation the air carrier is conducting in the areas summarized below. A fuller discussion of each area is contained in the preamble to NPRM 85-3.

One of the purposes of this amendment is to clearly define, for each type of operation (e.g., scheduled common carriage within the United States, all-cargo operations, scheduled common carriage outside the United States, etc.): (1) The type of certificate, (2) the certification requirements, (3) the operations specifications, and (4) the regulations within the applicable Parts of the FAR with which an operator must comply when conducting each type of operation.

As amended, SFAR 38-2 makes it clear that wherever the term "commuter air carrier" appears in Part 135 of the FAR, it shall be deemed to mean a holder of an "Air Carrier Operating Certificate" that is conducting scheduled passenger carrying operations with a frequency of operations of at least five round trips per week on at least one route between two or more points according to published flight schedules. This frequency of operations is a standard currently accepted by the industry and the FAA for air carrier certification and operation rules. However, this definition would not apply to Part 93 of the FAR. Further, a regulation that applies to a commuter air carrier will be deemed to mean a regulation that applies to scheduled passenger-carrying operations conducted under Part 135.

SFAR 38-2 allows the Administrator to authorize an air carrier who would otherwise be subject to Part 135 to elect to conduct its operations with transport category airplanes under Part 121. However, an air carrier is not allowed to operate airplanes subject to Part 121 under Part 135.

SFAR 38-2 does not reference § 135.2, and any air carrier conducting its operations under the "pass-through" provision is required to conduct its operations under Part 135, unless it receives authorization from the Administrator to conduct its operation under Part 121.

SFAR 38 is updated by adding provisions which reference Part 125 which became effective February 3, 1981, and deletes the provisions relating to Part 123 which was revoked effective January 1, 1983.

SFAR 38-2 requires rotorcraft operations that are now conducted under Part 121 or Part 127 to be conducted under Part 135. The amendment, in effect, suspends Part 127 and §§ 121.13 and 121.157(e), and requires all rotorcraft operations to be conducted under Part 135.

As amended, SFAR 38-2 includes the substance of the applicability of present Part 129 in order to provide for a comprehensive listing of certification and operations specifications requirements.

SFAR 38 as revised by this amendment will be effective until May 1, 1986, unless sooner superseded or revoked.

Comments on Proposed SFAR 38-2

During the comment period, the FAA received 15 comments. The limited number of comments received and the tone of the comments indicate overall substantial agreement with proposed SFAR 38-2. A few commenters recommended minor changes or raised questions about certain provisions of SFAR 38-2.

One commenter questioned whether the opening sentence of SFAR 38-2 which reads "Contrary provisions of Parts 121, 125, 127, 129, and 135 of the Federal Aviation Regulations notwithstanding," may create confusion. The "notwithstanding" clause is a carryover from original SFAR 38 and it does not appear to have caused the kind of confusion the commenter suggests.

Four commenters request that the phrase "passenger seating capacity" in proposed paragraphs 4(a) and 4(b) be changed to "passenger seating configuration" as it is in current SFAR 38 paragraphs 2(a) and (b) and 3(a) and (b). The reason is that the proposed wording would mean that if an aircraft has been certificated for a certain maximum seating capacity, that figure would be the compliance factor, rather than the number of installed passenger seats in the aircraft. The FAA did not intend to change the criteria for compliance and has, therefore, changed the language back to "passenger seating configuration" as it appears in the provisions of present SFAR 38 cited above.

For consistency of language within SFAR 38-2 and also for consistency of application of the FAR, the term "passenger seating capacity" in paragraph 5(a), which related to Part 125 has also been changed to "passenger seating configuration" even though Part 125 (section 125.1(a)) presently uses "seating capacity." The FAA does not consider this a substantive change since Part 125 has been applied on the basis of seating "configuration" rather than seating "capacity."

One commenter objected to the phrase "certain procedures" used in Section 3 as being unclear. The commenter suggested changing "certain procedures" to "appropriate regulations." The FAA does not agree. The term "certain procedures" refers to procedures that may be included in operations specifications to reflect requirements imposed on a specific operator in addition to the Federal Aviation Regulations. Examples would include specific procedures that might be tied in with a deviation or an exemption approved for that carrier. The commenter also objected to the phrase "size of aircraft" in Section 3 as not being sufficiently specific. The commenter suggested changing "size of aircraft" to "seating and payload capacity." The commenter's point is valid and has been

adopted by inclusion of a definition of "size of aircraft" in Section 6(c). Also, in Section 1(a) and in Section 3, the word "type" in reference to type of aircraft, has been changed to "class" to make it clear that the distinction intended is not between types of aircraft (e.g., B-727, DC-8, etc.) but rather between classes of aircraft (e.g., airplane, rotorcraft, etc.).

One commenter suggests that the preamble statements regarding CAB sunset be updated to show that a finding of fitness is a continuing requirement under the sunset legislation and that the Department of Transportation now has this function formerly handled by the CAB. The FAA agrees. The NPRM preamble was written before the 1984 amendments to the Airline Deregulation Act of 1978, (Pub. L. 98-443, October 4, 1984) which stipulated that DOT will continue the CAB function of determining fitness.

One commenter objects to the explanation in the preamble concerning confusion as to applicable regulations resulting from the sunset of the CAB. This commenter states that an FAA policy change, rather than confusion, was responsible for the FAA's requiring 21 carriers to shift from the supplemental rules of Part 121 to the domestic or flag rules of Part 121, as appropriate. This point was addressed in the preamble to the proposed revision of SFAR 38 as follows:

"It is the FAA's position that an air carrier certificated under current SFAR 38 in accordance with the rules of Part 121 must, if it is engaged in scheduled passenger operations, operate in accordance with the rules applicable to domestic or flag air carriers as required by § 121.3(a) or § 121.3(c) and be issued domestic and flag operations specifications. Furthermore, it is the FAA's position that an air carrier engaged in nonscheduled passenger-carrying operations must operate in accordance with the rules applicable to supplemental air carriers in accordance with § 121.3(e) and be issued supplemental operations specifications. The FAA has issued interpretive material to explain the correct application of these rules, but believes that the regulations should be clarified."

These 21 operators now have the appropriate operations specifications and have been brought in compliance with the applicable regulations in Part 121 so that this revision of SFAR 38 imposes no burden.

This commenter also thought that elimination of the "pass-through" provision in paragraph 2(d) of SFAR 38 would impose a similar burden. However, the inclusion of paragraph 4(b) as proposed allows persons operating transport category airplanes to obtain approval from the Administrator to conduct those operations under the appropriate provisions of Part 121. This provision is less limited than the original pass-through provision (which applied only to operations existing on December 1, 1978) and applies only when requested by the operator and approved by the Administrator.

Two commenters object to the definition of "commuter air carriers." One of the commenters seems to object to applying the term "commuter" to air carriers who are operating under Part 121 domestic rules, but who are operating propeller driven aircraft of less than 60 seats. Such operators consider themselves to be "regional" air carriers who compete equally with other types of air carriers. However, the definition of commuter air carriers does not apply to operations under Part 121 because it applies only to operations under Part 135 with aircraft having a maximum passenger seating configuration of 30 seats or less and a maximum payload capacity of 7,500 pounds or less.

A second commenter objects to provisions in the definition of "commuter air carriers" that state that frequency of operations is "at least five round trips per week on at least one route between two or more points . . . ." The commenter objects on the basis that the definition constitutes a public convenience and necessity requirement and that the authority domestically to issue a Certificate of Public Convenience and Necessity for domestic operations was terminated by Congress on January 1, 1982. In response, the FAA does not intend by this definition to create a public convenience and necessity requirement in the "commuter air carrier" definition. The definition has been used historically in Part 135 to refer to scheduled operations as opposed to non-scheduled. To preclude a change in the operations requirements prescribed in SFAR 38, the commuter

air carrier route and frequency stipulation is needed in the SFAR 38-2 definition in order to continue to exclude those operators who may fly fewer than five round trips per week from certain commuter air carrier requirements prescribed in Part 135.

A commenter objected to the definition of "scheduled operations." According to the commenter, the definition would require charter operators to be issued domestic air carrier operations specifications if they were to contract for a series of public charters. The FAA does not agree that this definition includes legitimate charter operations. Scheduled operations by definition depart at a stated time and place and are readily available to the general public. While, on occasion, "charter" flights are "announced" in advance, the charter operator normally does not commit to having the flight operate unless a minimum load of passengers is booked in advance. Thus, the general public cannot depend upon a chartered flight maintaining a schedule (for example, there may be a last minute flight cancellation because not enough passengers signed up for the flight) as they can on a scheduled flight. An operator who attempts to hold itself out as a charter operator but who, in fact, announces regularly scheduled flights to the public would be considered a scheduled operator and would have to comply with the regulations for scheduled operations under Part 121 or Part 135, as appropriate.

Two commenters expressed concern that the definition of "air carriers" in Section 6(c)(1) would require all indirect "air carriers" to have operating certificates and operations specifications under section 1(c) which states that "no person may operate without, or in violation of, a certificate and operations specifications issued under this SFAR."

While it is true, as these commenters point out, that the Federal Aviation Act of 1958 defines "air carrier" to include one who acts "indirectly," the FAA has never extended its air carrier regulations to persons who are legitimately engaged in indirect operations such as bona fide freight forwarder. SFAR 38-2 does not treat indirect operators any differently than current SFAR 38 and so there is no substantive change. However, this does not mean that an indirect air carrier can avoid air carrier certification requirements if, in fact, that carrier is engaged in the operation of aircraft or exercises its authority over initiating, conducting, or terminating a flight or flights.

One commenter states that the application of Part 135 is somewhat open-ended with respect to rotorcraft having a passenger seating configuration of more than 30 seats or a maximum payload capacity of more than 7,500 pounds. The commenter states that in their responses to other rulemaking proposals concerning rotorcraft, such as Notice No. 85-8 (50 FR 10144, March 13, 1985), industry groups must now consider future operations of larger helicopters under Part 135. In response, the FAA notes that the proposal to require all sizes of rotorcraft to be operated under Part 135 is based on the recognition that there are significant deficiencies in Parts 121 and 127 that must be addressed before authorizing any rotorcraft operations under those rules. The issuance of special operations specifications is identified in the preamble of the proposal as an option to permit the operation of larger rotorcraft under Part 135. In the meantime, Exemptions Nos. 4109 and 4297 have been issued to two operators to permit the operation of BV-234 helicopters under Part 135. The FAA recognizes that additional rulemaking is needed to adequately cover the operation of rotorcraft having a passenger seating configuration of more than 30 seats, excluding any required crewmember seat, or a payload capacity of more than 7,500 pounds. In the interim, since Part 135 does not presently address that size rotorcraft, operators of these rotorcraft will be issued special operations specifications which will provide for the appropriate level of safety required for that size aircraft. New paragraphs 4(d) and 5(d) are added to this SFAR to clarify this point, and to spell out what was intended in the NPRM.

Three commenters suggest changes which are beyond the scope of this Notice of Proposed Rulemaking. As stated earlier in this notice and in the NPRM, this rulemaking updates and clarifies SFAR-38; it does not substantively revise the basic applicability of the affected parts. Therefore, these recommendations for substantive change beyond the scope of Notice 85-3 have not been considered in this rulemaking.

Good Cause Justification for Immediate Adoption

The termination date for SFAR 38 as extended by SFAR 38–1, is June 1, 1985. There are numerous operating certificates issued under the provisions of SFAR 38, as amended. In order to avoid confusion in the administration of FAA regulations regarding operating certificates and operating requirements, it is necessary that this amendment be effective as soon as possible. Therefore, I find that good cause exists for making this amendment effective in less than 30 days.

Economic Impact

The FAA evaluated the economic impact of this amendment. This amendment is not expected to cause an adverse economic impact on the regulated parties because it is essentially clarifying in nature. The findings of FAA's evaluation are summarized below and a copy of the regulatory evaluation is contained in the docket.

The rule (1) Specifies and clarifies certification requirements and regulations operators must comply with in conducting specific operations, (2) includes regulations that have been promulgated and deletes references to regulations that have been withdrawn since the adoption of SFAR 38, and (3) suspends regulations that are no longer applicable.

As previously pointed out, it is the FAA's position that the current regulations require scheduled operations in airplanes with more than 30 passenger seats to be conducted under the domestic or flag air carrier rules. Therefore, as the result of this rule, there should be minimal economic impact on the approximately 21 carriers previously discussed. Accordingly, a full economic evaluation is not required. Notwithstanding the above position, an evaluation was performed. This evaluation reveals that a small net benefit will accrue to the affected carriers because costs that may result from having to comply with the domestic and flag rules would be more than offset by cost savings associated with relaxation of reserve fuel requirements.

SFAR 38–2 suspends Part 127 and requires all rotorcraft carriers currently operating under Parts 121 and 127 to conduct their operations under Part 135. Such a change is expected to enhance safety because Part 135 contains safety related requirements for rotorcraft not specified in either Part 121 or 127. This rule will not generate any additional costs to regulated parties. At present, only two carriers, under exemption authority, operate rotorcraft with a capacity in excess of 30 seats or a 7,500-pound payload under Part 135. These rotorcraft would normally be subject to the provisions of Part 121 or 127. Moreover, commuter operations with large rotorcraft currently do not appear feasible at locations where the geographical distribution of service points make rotorcraft operations viable.

Trade Impact Statement

The FAA finds that the amendment will have no impact on international trade.

Regulatory Flexibility Determination

The FAA finds that the amendment will have no consequential economic impact on small entities. Accordingly, the FAA finds that an initial regulatory flexibility analysis is not required by the Regulatory Flexibility Act.

Conclusion

For the reasons stated under the heading "Economic Impact," the FAA has determined that this document involves a rule which: (1) Is not a major rule under Executive Order 12291; and (2) is not a significant rule under Department of Transportation Regulatory Policies and Procedures (44 FR 11034; Feb. 26, 1979). Also, for the reasons stated under the heading "Trade Impact Statement and Regulatory Flexibility Determination," I certify that the rule will not have a substantial economic impact on a substantial number of small entities. The total projected impact of the amendment may be found in a copy of the regulatory evaluation contained in the public

docket. A copy of that evaluation may be obtained by contacting the person identified above under the caption "FOR FURTHER INFORMATION CONTACT."

THE AMENDMENT

In consideration of the above, SFAR 38 (14 CFR Parts 121, 125, 127, 129, and 135 is revised effective June 4, 1985.

Authority: 49 U.S.C. 1354(a), 1421, 1423, 1424, and 1502; 49 U.S.C. 106(g) (revised Pub. L. 97-449, January 12, 1983).

Special Federal Aviation Regulation 38-3
Certification and Operating Requirements

Adopted: April 30, 1986 **Effective: May 8, 1986**

(Published in 51 FR 17274, May 9, 1986)

SUMMARY: These amendment extends the effectiveness of Special Federal Aviation Regulations (SFAR) No. 38-2 (50 FR 23941; June 7, 1985). SFAR 38- revised SRAR 38 primarily by specifying and clarifying FAA requirements for operating certificates and operations specifications for persons who operate under Federal Aviation Regulations (FAR) Parts 121 and 135. The amendment brought SFAR 38 up to date in view of changes in the regulations and the aviation industry that had occurred since it was issued in 1978 and also as part of the FAA's response to the sunset of the Civil Aeronautics Board (CAB). Having generally reviewed the FAA regulations to determine the most appropriate response to the Airline Deregulation Act of 1978 (ADA) and the termination of CAB functions attendant on the CAB sunset, the FAA now concludes that it is necessary to extend the termination date of SFAR 38-2 to allow time for the FAA, in a separate rulemaking action, to propose and receive comments on the incorportaion of SFAR 38-2 into the FAR. The termination date for SFAR 38-2 is extended to June 1, 1987. The FAA intends to publish a notice rescinding SFAR 38-2 and a final rule incorporating SFAR 38-2 into the FAR concurrently in the Federal Register.

Comments must be received on or before June 9, 1986.

ADDRESSES: Send comments on the rule in duplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attn: Rules Docket (AGC-204), Docket No. 18510, 800 Independence Avenue, S.W., Washington, D.C. 20591, or deliver comments in duplicate to: Federal Aviation Administration, Rules Docket, Room 916, 800 Independence Avenue, S.W., Washington, D.C. Comments may be examined in the Rules Docket weekdays, except Federal holidays, between 8:30 a.m. and 5 p.m.

FOR FURTHER INFORMATION CONTACT: Mr. Michael Coffey, Project Development Branch, AFS-240, Air Transportation Division, Office of Flight Standards, Federal Aviation Administration, 800 Independence Avenue, S.W., Washington, D.C. 20591, telephone (202) 426-8096.

Background

On December 12, 1978, the FAA promulgated SFAR 38 in consequence of the ADA (Pub. L. 95-504, 92 Stat. 1705). That Act embodies the Congressional intent that the Federal Government diminish its involvement in regulating the economic aspects of the airline industry. To accomplish this, Congress directed that the CAB be abolished on December 31, 1984. Anticipating its sunset, the CAB curtailed or suspended much of its regulatory activity during the period 1979-1984. On October 4, 1984, additional legislation was enacted further defining the process of CAB sunset. On Janusry 1, 1985, those remaining CAB functions were transferred to the Department of Transportation (DOT).

Because some aspects of FAA safety regulation relied upon CAB definitions and authority, the FAA found it necessary in 1978 to adopt an interim measure to provide for an orderly transition from CAB and FAA interlocking authority to a regulatory regime

with no CAB in existence. This action was consistent with the Congressional directive contained in Section 107(a) of the Act that the deregulation of airline economics result in no diminution of the high standard of safety in air transportation which existed when the ADA was enacted. SFAR 38 set forth FAA certification and operating requirements applicable to all "air commerce" and " air transportation" operations for "compensation or hire" (SFAR 38 did not address Part 133 External Load Operations, Part 137 Agriculture Aircraft Operations, or Part 91 training and other special purpose operations.)

On December 27, 1984, the FAA adopted SFAR 38–1 which merely extended the termination date of the regulation, and allowed the FAA time to propose and receive comments on revising SFAR 38.

On May 28, 1985, the FAA adopted SFAR 38–2, which updated SFAR 38 in light of changes since 1978 and clarified provisions that state which FAA regulations apply to each air carrier and each type of operation. This action was necessary because of the changes in the air transportation industry brought about by economic deregulation. Before deregulation, economic certificates were fairly rigidly compartmentalized and each air carrier typically was authorized to conduct only one type of operation (domestic, flag, or charter (supplemental)). The safety certificate issued to the air carrier by the FAA paralleled the authorization granted in the air carrier's economic certificate. Economic deregulation broke down the barriers between the various types of operations. The economic authority granted an air carrier by the DOT is no longer indicative of the safety regulations applicable to the type of operation authorized by the FAA. Thus, it was necessary for the FAA to establish guidelines to determine what safety standards were applicable to an air carrier's particular operation.

Good Cause Justification for Immediate Adoption

The termination date for SFAR 38–2 and the operating cedrtificates issued under SFAR 38, as amended, is May 1, 1986. The reasons which justified the adoption, and the subsequent revision, of SFAR 38 still exist. The FAA is currently preparing a Notice of Proposed Rulemaking (NPRM) which will consolidate the certification rules now in Parts 121 and 135 into a new Part of the FAR. This NPRM will also propose incorporating the necessary portions of SFAR 38–2 into the FAR. Therefore, it is in the public interest to extend the termination date of SFAR 38–2 from May 1, 1986 to June 1, 1987, although the FAA anticipates that a final rule incorporating SFAR 38–2 in the FAR will be published before then. If it is, a notice rescinding SFAR 38–2 will be published concurrently. This action is necessary to permit continued operations under operating certificates issued under SFAR 38, as amended, and to avoid confusion in the administration of FAA regulations regarding operating certificates and operating requirements.

In addition, since this amendment continues in effect the provisions of a currently effective SFAR and imposes no additional burden on any person, I find that notice and public procedures are unnecessary, impracticable, and contrary to the public interest, and that the amendment should be made effective in less than 30 days after publication. However, interested persons are invited to submit such comments as they may desire regarding this amendment. Communications should identify the docket number and be submitted in duplicate to the address above. All communications received on or before the close of the comment period will be considered by the Administrator, and this amendment may be changed in light of the comments received. All comments will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested parties.

Trade Impact Statement

The FAA finds that this amendment will have no impact on international trade.

Conclusion

The FAA has determined that this document involves a rule change which imposes no additional burden on any person. Accordingly, it has been determined that: the rule change does not involve a major rule under Executive Order 12291; it is not significant

under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and its anticipated impact is so minimal that a full regulatory evaluation is not required.

Adoption of the Amendment

In consideration of the foregoing, SFAR 38-2 (14 CFR Parts 121, 125, 127, 129, and 135) of the Federal Aviation Regulations is effective May 8, 1986.

The authority citation for SFAR 38-2 continues to read as follows:

Authority: 49 U.S.C. 1354(a), 1421, 1423, and 1502; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983).

Special Federal Aviation Regulation 38-4

Certification and Operating Requirements

Adopted: July 15, 1987 **Effective: August 4, 1987**

(Published in 52 FR 28938, August 4, 1987)

SUMMARY: This amendment reinstates Special Federal Aviation Regulation (SFAR) No. 38-2 (50 FR 23941; June 7, 1985) and establishes a new termination date. The SFAR 38-2 was previously amended by SFAR 38-3 (51 FR 17274; May 9, 1986) to extend its termination date to allow time for the FAA, in a separate rulemaking action, to prepare a Notice of Proposed Rulemaking (NPRM) that would consolidate the certification rules now in Parts 121 and 135 into a new part of the FAR. This NPRM would also propose incorporating the necessary portions of SFAR 38-2 into the FAR. Having generally reviewed the FAA regulations to determine the most appropriate response to the Airline Deregulation Act of 1978 (ADA) and the termination of CAB functions following the CAB sunset, the FAA now concludes that it is necessary to renew the effectiveness of SFAR 38-2 and to establish a new termination date to allow time for the FAA to complete the rulemaking process that will consolidate the certification rules and incorporate SFAR 38-2 into the FAR. The termination date for reinstated SFAR 38-2 is June 1, 1989. The FAA intends to publish a notice rescinding SFAR 38-2 and a final rule incorporating SFAR 38-2 into the FAR concurrently in the Federal Register.

Comments must be received on or before October 5, 1987.

ADDRESSES: Send comments on the rule in duplicate to Federal Aviation Administration, Office of the Chief Counsel, Attn.: Rule Docket (AGC-204), Docket No. 18518, 800 Independence Avenue S.W., Washington, DC 20591, or deliver comments in duplicate to: Federal Aviation Administration, Rule Docket, Room 916, 800 Independence Avenue S.W., Washington, DC. Comments may be examined in the Rules Docket weekdays, except Federal holidays, between 8:30 a.m. and 5 p.m.

FOR FURTHER INFORMATION CONTACT: Mr. Michael Coffey, Project Development Branch, AFS-240, Air Transportation Division, Office of Flight Standards, Federal Aviation Administration, 800 Independence Avenue S.W., Washington, DC 20591. Telephone (202) 267-3750.

SUPPLEMENTARY INFORMATION:

Background

On December 12, 1978, the FAA promulgated SFAR 38 (43 FR 58366; December 14, 1978) in consequence of the ADA (Pub. L. 95-504, 92 Stat. 1705). That Act expresses the Congressional intent that the Federal Government diminish its involvement in regulating the economic aspects of the airline industry. To accomplish this, Congress directed that the CAB be abolished on December 31, 1984, and that various of its functions cease before that date. Anticipating its sunset, the CAB itself curtailed or suspended much of its regulatory activity during the period 1979-1984. On October 4, 1984, additional legislation was enacted further defining the process of CAB sunset. On January 1, 1985, the remaining CAB functions were transferred to the Department of Transportation (DOT).

Because some aspects of FAA safety regulation relied upon CAB definitions and authority, the FAA found it necessary in 1978 to adopt an interim measure to provide for an orderly transition from CAB and FAA interlocking authority to a regulatory regime with no CAB in existence. This action was consistent with the Congressional directive contained in Section 107(a) of the Act that the deregulation of airline economics result in no diminution of the high standards of safety in air transportation that existed when the ADA was enacted. The SFAR 38 set forth FAA certification and operating requirements applicable to all "air commerce" and "air transportation" operations for "compensaton or hire." (SFAR 38 did no address Part 133 External Load Operations, Part 137 Agriculture Aircraft Operations, or Part 91 training and other special purpose operations.)

On December 27, 1984, the FAA adopted SFAR 38-1 (50 FR 450; January 4, 1985), which merely extended the termination date of the regulation and allowed the FAA time to propose and receive comments on revising SFAR 38.

On May 28, 1985, the FAA adopted SFAR 38-2, which updated SFAR 38 in light of changes since 1978 and clarified provisions stating which FAA regulations apply to each air carrier and each type of

operation. This action was necessary because of the changes in the air transportation industry brought about by economic deregulation. Before deregulation, economic certificates were fairly rigidly compartmentalized and each air carrier typically was authorized to conduct only one type of operation (domestic, flag, or charter (supplemental)). The safety certificate issued to the air carrier by the FAA paralleled the authorization granted in the air carrier's economic certificate. Economic deregulation broke down the barriers between the various types of operations. The economic authority granted an air carrier by the DOT is no longer indicative of the safety regulations applicable to the type of operation authorized by the FAA. Thus, it was necessary for the FAA to establish guidelines to determine what safety standards were applicable to an air carrier's particular operation.

On May 8, 1986, the FAA adopted SFAR 38-3, which merely extended the termination date of SFAR 38-2 to allow the FAA time to incorporate its contents into an NPRM that will propose consolidation of the certification rules in Parts 121 and 135, and will incorporate various provisions of SFAR 38-2 into a new part of the FAR.

Good Cause Justification For Immediate Adoption

Because of unavoidable, administrative delays, SFAR 38-2 terminated on June 1, 1987. The reasons which justified the adoption, and the subsequent revision, of SFAR 38 still exist. Therefore, it is in the public interest to reinstate SFAR 38-2 and to establish a new termination date of June 1, 1989, although the FAA anticipates that a final rule incorporating SFAR 38-2 into the FAR will be published before then. If it is, a notice rescinding SFAR 38-2 will be published concurrently. This action is necessary to permit continued operations under SFAR 38, as amended, and to avoid confusion in the administration of FAA regulations regarding operating certificates and operating requirements.

For this reason, and because this amendment continues in effect the provisions of a currently effective SFAR and imposes no additional burden on any person, I find that notice and public procedures are unnecessary, impracticable, and contrary to the public interest, and that the amendment should be made effective in less than 30 days after publication. However, interested persons are invited to submit such comments as they may desire regarding this amendment. Communications should identify the docket number and be submitted in duplicate to the address above. All communications received on or before the close of the comment period will be considered by the Administrator, and this amendment may be changed in light of the comments received. All comments will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested parties.

Trade Impact Statement

The FAA finds that this amendment will have no impact on international trade.

Conclusion

The FAA has determined that this document involves an amendment that imposes no additional burden on any person. Accordingly, it has been determined that: The action does not involve a major rule under Executive Order 12291; it is not significant under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and its anticipated impact is so minimal that a full regulatory evaluation is not required.

Adoption of the Amendment

In consideration of the foregoing, SFAR 38-2 (14 CFR Parts 121, 125, 127, 129, and 135) of the Federal Aviation Regulations is amended effective August 4, 1987.

The authority citation for Part 127 is revised to read as follows:

Authority: 49 U.S.C. 1354(a), 1421, 1422, 1423, 1424, 1425, 14530; 49 U.S.C. 106(g) (revised Pub. L. 97-449, January 12, 1983).

Special Federal Aviation Regulation 38-5

Certification and Operating Requirements

Adopted: May 26, 1989 **Effective: June 2, 1989**

(54 FR 23864, June 2, 1989)

SUMMARY: This amendment establishes a new termination date for Special Federal Aviation Regulation [SFAR] No. 38-2 [50 FR 23941, June 7, 1985]. SFAR 38-2 was reinstated by SFAR 38-4 [52 FR 28938, August 4, 1987] and was amended to extend its termination date to allow time for the FAA, in a separate rulemaking action, to prepare a Notice of Proposed Rulemaking (NPRM) [Notice No 88-16, 53 FR 39852, October 12, 1988] to consolidate the certification rules now in SFAR 38-2, Part 121, and Part 135 into a new Part 119 of the Federal Aviation Regulations (FAR). The FAA stated in SFAR 38-3 and in SFAR 38-4 that having generally reviewed the FAA regulations to determine the most appropriate response to the Airline Deregulation Act of 1978 [ADA or Act] and the termination of Civil Aeronautics Board (CAB) functions following the CAB sunset, it was necessary to establish a new termination date for SFAR 38-2 to allow time for the FAA to complete the rulemaking process that will consolidate the certification rules and incorporate SFAR 38-2 into the FAR. The current termination date for SFAR 38-2 is June 1, 1989. Because the FAA has not completed this rulemaking process it is necessary to extend the current termination date 1 year. If new Part 119 is issued before June 1, 1989, or before the new termination date, the FAA intends to publish a notice rescinding SFAR 38-2 concurrently with the new Part 119 final rule in the *Federal Register*.

Effective date: June 2, 1989. Comments must be received on or before August 1, 1989.

ADDRESSES: Send comments on the rule in duplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attn: Rules Docket (AGC-10), Docket No. 18510, 800 Independence Avenue, SW., Washington, DC 20591, or deliver comments in duplicate to: Federal Aviation Administration, Rules Docket, Room 916, 800 Independence Avenue, SW., Washington, DC. Comments may be examined in the Rules Dockets weekdays, except Federal holidays, between 8:30 a.m. and 5 p.m.

FOR FURTHER INFORMATION CONTACT: Mr. Michael Coffey, Project Development Branch, AFS-240, Air Transportation Division, Flight Standards Service, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; Telephone (202) 267-3750.

SUPPLEMENTAL INFORMATION:

Background

On December 12, 1978, the FAA issued SFAR 38 [43 FR 58366, December 14, 1978] in consequence of the ADA (Pub. L. 95-504, 92 Stat. 1705). That Act expresses the Congressional intent that the Federal Government diminish its involvement in regulating the economic aspects of the airline industry. To accomplish this, Congress directed that the CAB be abolished on December 31, 1984, and that various of its functions cease before that date. Anticipating its sunset, the CAB itself curtailed or suspended much of its regulatory activity during the period 1979-1984. On October 4, 1984, additional legislation was enacted further defining the process of CAB sunset. On January 1, 1985, the remaining CAB functions were transferred to the Department of Transportation (DOT).

Because some aspects of FAA safety regulations relied upon CAB definitions and authority, the FAA found it necessary in 1978 to adopt an interim measure to provide for an orderly transition from CAB and FAA interlocking authority to a regulatory regime with no CAB in existence. This action was consistent with the Congressional directive contained in Section 107(a) of the Act that the deregulation of airline economics result in no diminution of the high standard of safety in air transportation that existed when the ADA was enacted. SFAR 38 set forth FAA certification and operating requirements applicable to all "air commerce" and "air transportation" operations for "compensation or hire." (SFAR 38 did not address Part 133 External Load Operations, Part 137 Agriculture Aircraft Operations, or Part 91 training and other special purpose operations.)

On December 27, 1984, the FAA issued SFAR 38-1 [50 FR 450, January 4, 1985], which merely extended the termination date of the regulation and allowed the FAA time to propose and receive comments on revising SFAR 38.

On May 28, 1985, the FAA issued SFAR 38-2 [50 FR 23491, June 7, 1985], which updated SFAR 38 in light of changes since 1978 and clarified provisions stating which FAA regulations apply to each air carrier and each type of operation. This action was necessary because of the charges in the air transportation industry brought about by economic deregulation. Before deregulation, economic certificates were rigidly compartmentalized and each air carrier typically was authorized to conduct only one type of operation (domestic, flag, or charter (supplemental)). The safety certificate issued to the air carrier by the FAA paralleled the authorization granted in the air carrier's economic certificate. Economic deregulation broke down the barriers between the various types of operations. The economic authority granted an air carrier by the DOT is no longer indicative of the safety regulations applicable to the type of operation authorized by the FAA. Thus, it was necessary for the FAA to establish guidelines to determine what safety standards were applicable to an air carrier's particular operation.

On April 30, 1986, the FAA issued SFAR 38-3, which extended the termination date of SFAR 38-2 to allow the FAA time to incorporate its contents into Notice No. 88-16. That notice proposes to consolidate the certification rules in Parts 121 and 135, and to incorporate various provisions of SFAR 38-2 into new Part 119 of the FAR.

On July 15, 1987, the FAA issued SFAR 38-4, which reinstated SFAR 38-2 because it was inadvertently allowed to expire, and extended its termination date to June 1, 1989. That extension allowed the FAA time to incorporate the contents of SFAR 38-2 into Notice No. 88-16.

Good Cause Justification for Immediate Adoption

The reasons which justify the adoption, and the subsequent revision, of SFAR 38 still exist. Therefore, it is in the public interest to establish a new termination date for SFAR 38-2 of June 1, 1990. If the FAA publishes a final rule incorporating SFAR 38-2 into the FAR before the termination date, a notice rescinding SFAR 38-2 will be published concurrently. This action is necessary to permit continued operations under SFAR 38, as amended, and to avoid confusion in the administration of FAA regulations regarding operating certificates and operating requirements.

For this reason, and because this amendment continues in effect the provisions of a currently effective SFAR and imposes no additional burden on any person, I find that notice and public procedures are unnecessary, impracticable, and contrary to the public interest, and that the amendment should be made effective in less than 30 days after publication. However, interested persons are invited to submit such comments as they desire regarding this amendment. Communications should identify the docket number and be submitted in duplicate to the address above. All communications received on or before the close of the comment period will be considered by the Administrator, and this amendment may be changed in light of the comments received. All comments will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested parties.

International Trade Impact Analysis

The FAA finds this amendment will have no impact on international trade.

Federalism Implications

The amendment herein would not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this amendment would not have sufficient federalism applications to warrant the preparation of a Federalism Assessment.

CONCLUSION

The FAA has determined that this document involves an amendment that imposes no additional burden on any person. Accordingly, it has been determined that: The action does not involve a major rule under Executive Order 12291; it is not significant under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and its anticipated impact is so minimal that a full regulatory evaluation is not required.

ADOPTION OF THE AMENDMENT

In consideration of the foregoing SFAR 38–2 (14 CFR Parts 121, 125, 127, 129, and 135) of the Federal Aviation Regulations is amended effective June 2, 1989.

The authority citiation for Part 127 is revised to read as follows:

Authority: 49 U.S.G. 1354(a), 1421, 1422, 1423, 1424, 1425, 1430; 49 U.S.C. 106(g) (revised Pub. L. 97–449, January 12, 1983.)

[Special Federal Aviation Regulation 38-2
Certification and Operating Requirements

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[Special Federal Aviation Regulation 38-2

[Contrary provisions of Parts 121, 125, 127, 129, and 135 of the Federal Aviation Regulations notwithstanding—

1. *Applicability.*

(a) This Special Federal Aviation Regulation applies to persons conducting commercial passenger operations, cargo operations, or both, and prescribes—

(1) The types of operating certificates issued by the Federal Aviation Administration;

(2) The certification requirements an operator must meet in order to obtain and hold operations specifications for each type of operation conducted and each class and size of aircraft operated; and

(3) The operating requirements an operator must meet in conducting each type of operation and in operating each class and size of aircraft authorized in its operations specifications.

A person shall be issued only one certificate and all operations shall be conducted under that certificate, regardless of the type of operation or the class or size of aircraft operated. A person holding an air carrier operating certificate may not conduct any operations under the rules of Part 125.

(b) Persons conducting operations under more than one paragraph of this SFAR shall meet the certification requirements specified in each paragraph and shall conduct operations in compliance with the requirements of the Federal Aviation Regulations specified in each paragraph for the operation conducted under that paragraph.

(c) Except as provided under this SFAR, no person may operate as an air carrier or as a commercial operator without, or in violation of, a certificate and operations specifications issued under this SFAR.

2. *Certificates and foreign air carrier operations specifications.*

(a) Persons authorized to conduct operations as an air carrier will be issued an Air Carrier Operating Certificate.

(b) Persons who are not authorized to conduct air carrier operations, but who are authorized to conduct passenger, cargo, or both, operations as a commercial operator will be issued an Operating Certificate.

(c) FAA certificates are not issued to foreign air carriers. Persons authorized to conduct operations in the United States as a foreign air carrier who hold a permit issued under Section 402 of the Federal Aviation Act of 1958, as amended (49 U.S.C. 1372), or other appropriate economic or exemption authority issued by the appropriate agency of the United States of America will be issued operations specifications in accordance with the requirements of Part 129 and shall conduct their operations within the United States in accordance with those requirements.

3. *Operations specifications.*

The operations specifications associated with a certificate issued under paragraph 2(a) or (b) and the operations specifications issued under paragraph 2(c) of this SFAR will prescribe the authorizations, limitations and certain procedures under which each type of operation shall be conducted and each class and size of aircraft shall be operated.

4. *Air carriers, and those commercial operators engaged in scheduled intrastate common carriage.*

Each person who conducts operations as an air carrier or as a commercial operator engaged in scheduled intrastate common carriage of persons or property for compensation or hire in air commerce with—

(a) Airplanes having a passenger seating configuration of more than 30 seats, excluding any required crewmember seat, or a payload capacity of more than 7,500 pounds, shall comply with the certification requirements in Part 121, and conduct its—

(1) Scheduled operations within the 48 contiguous states of the United States and the District of Columbia, including routes that extend outside the United States that are specifically authorized by the Administrator, with those airplanes in accordance with the]

[requirements of Part 121 applicable to domestic air carriers, and shall be issued operations specifications for those operations in accordance with those requirements.

(2) Scheduled operations to points outside the 48 contiguous states of the United States and the District of Columbia with those airplanes in accordance with the requirements of Part 121 applicable to flag air carriers, and shall be issued operations specifications for those operations in accordance with those requirements.

(3) All-cargo operations and operations that are not scheduled with those airplanes in accordance with the requirements of Part 121 applicable to supplemental air carriers, and shall be issued operations specifications for those operations in accordance with those requirements; except the Administrator may authorize those operations to be conducted under paragraph (4) (a) (1) or (2) of this paragraph.

(b) Airplanes having a maximum passenger seating configuration of 30 seats or less, excluding any required crewmember seat, and a maximum payload capacity of 7,500 pounds or less, shall comply with the certification requirements in Part 135, and conduct its operations with those airplanes in accordance with the requirements of Part 135, and shall be issued operations specifications for those operations in accordance with those requirements; except that the Administrator may authorize a person conducting operations in transport category airplanes to conduct those operations in accordance with the requirements of paragraph 4(a) of this paragraph.

(c) Rotorcraft having a maximum passenger seating configuration of 30 seats or less and a maximum payload capacity of 7,500 pounds or less shall comply with the certification requirements in Part 135, and conduct its operations with those aircraft in accordance with the requirements of Part 135, and shall be issued operations specifications for those operations in accordance with those requirements.

(d) Rotorcraft having a passenger seating configuration of more than 30 seats or a payload capacity of more than 7,500 pounds shall comply with the certification requirements in Part 135, and conduct its operations with those aircraft in accordance with the requirements of Part 135, and shall be issued special operations specifications for those operations in accordance with those requirements and this SFAR.

5. *Operations conducted by a person who is not engaged in air carrier operations, but is engaged in passenger operations, cargo operations, or both, as a commercial operator.*

Each person, other than a person conducting operations under paragraph 2(c) or 4 of this SFAR, who conducts operations with—

(a) Airplanes having a passenger seating configuration of 20 or more, excluding any required crewmember seat, or a maximum payload capacity of 6,000 pounds or more, shall comply with the certification requirements in Part 125, and conduct its operations with those airplanes in accordance with the requirements of Part 125, and shall be issued operations specifications in accordance with those requirements, or shall comply with an appropriate deviation authority.

(b) Airplanes having a maximum passenger seating configuration of less than 20 seats, excluding any required crewmember seat, and a maximum payload capacity of less than 6,000 pounds shall comply with the certification requirements in Part 135, and conduct its operations in those airplanes in accordance with the requirements of Part 135, and shall be issued operations specifications in accordance with those requirements.

(c) Rotorcraft having a maximum passenger seating configuration of 30 seats or less and a maximum payload capacity of 7,500 pounds or less shall comply with the certification requirements in Part 135, and conduct its operations in those aircraft in accordance with the requirements of Part 135, and shall be issued operations specifications for those operations in accordance with those requirements.

(d) Rotorcraft having a passenger seating configuration of more than 30 seats or a payload capacity of more than 7,500 pounds shall comply with the certification requirements in Part 135, and conduct its operations with those aircraft in accordance with the requirements of Part 135, and shall be issued special operations specifications for those operations in accordance with those requirements and this SFAR.]

[6. *Definitions.*

(a) Wherever in the Federal Aviation Regulations the terms—

(1) "Domestic air carrier operating certificate," "flag air carrier operating certificate," "supplemental air carrier operating certificate," or "commuter air carrier" (in the context of Air Carrier Operating Certificate) appears, it shall be deemed to mean an "Air Carrier Operating Certificate" issued and maintained under this SFAR.

(2) "ATCO operating certificate" appears, it shall be deemed to mean either an "Air Carrier Operating Certificate" or "Operating Certificate," as is appropriate to the context of the regulation. All other references to an operating certificate shall be deemed to mean an "Operating Certificate" issued under this SFAR unless the context indicates the reference is to an Air Carrier Operating Certificate.

(b) Wherever in the Federal Aviation Regulations a regulation applies to—

(1) "Domestic air carriers," it will be deemed to mean a regulation that applies to scheduled operations solely within the 48 contiguous states of the United States and the District of Columbia conducted by persons described in paragraph 4(a) (1) of this SFAR.

(2) "Flag air carriers," it will be deemed to mean a regulation that applies to scheduled operations to any point outside the 48 contiguous states of the United States and the District of Columbia conducted by persons described in paragraph 4(a) (2) of this SFAR.

(3) "Supplemental air carriers," it will be deemed to mean a regulation that applies to charter and all-cargo operations conducted by persons described in paragraph 4(a) (3) of this SFAR.

(4) "Commuter air carriers," it will be deemed to mean a regulation that applies to scheduled passenger carrying operations, with a frequency of operations of at least five round trips per week on at least one route between two or more points according to the published flight schedules, conducted by persons described in paragraph 4(b) or (c) of this SFAR. This definition does not apply to Part 93 of this chapter.

(c) For the purpose of this SFAR, the term—

(1) "Air carrier" means a person who meets the definition of an air carrier as defined in the Federal Aviation Act of 1958, as amended.

(2) "Commercial operator" means a person, other than an air carrier, who conducts operations in air commerce carrying persons or property for compensation or hire.

(3) "Foreign air carrier" means any person other than a citizen of the United States, who undertakes, whether directly or indirectly or by lease or any other arrangement, to engage in foreign air transportation.

(4) "Scheduled operations" means operations that are conducted in accordance with a published schedule for passenger operations which includes dates or times (or both) that is openly advertised or otherwise made readily available to the general public.

(5) "Size of aircraft" means an aircraft's size as determined by its seating configuration or payload capacity, or both.

(6) "Maximum payload capacity" means:

(i) For an aircraft for which a maximum zero fuel weight is prescribed in FAA technical specifications, the maximum zero fuel weight, less empty weight, less all justifiable aircraft equipment, and less the operating load (consisting of minimum flight crew, foods and beverages, and supplies and equipment related to foods and beverages, but not including disposable fuel or oil).

(ii) For all other aircraft, the maximum certificated takeoff weight of an aircraft, less the empty weight, less all justifiable aircraft equipment, and less the operating load (consisting of minimum fuel load, oil, and flightcrew). The allowance for the weight of the crew, oil, and fuel is as follows:

(A) Crew—200 pounds for each crewmember required by the Federal Aviation Regulations.]

(B) Oil—350 pounds.

(C) Fuel—the minimum weight of fuel required by the applicable Federal Aviation Regulations for a flight between domestic points 174 nautical miles apart under VFR weather conditions that does not involve extended overwater operations.

(7) "Empty weight" means the weight of the airframe, engines, propellers, rotors, and fixed equipment. Empty weight excludes the weight of the crew and payload, but includes the weight of all fixed ballast, unusable fuel supply, undrainable oil, total quantity of engine coolant, and total quantity of hydraulic fluid.

(8) "Maximum zero fuel weight" means the maximum permissible weight of an aircraft with no disposable fuel or oil. The zero fuel weight figure may be found in either the aircraft type certificate data sheet, or the approved Aircraft Flight Manual, or both.

(9) "Justifiable aircraft equipment" means any equipment necessary for the operation of the aircraft. It does not include equipment or ballast specifically installed, permanently or otherwise, for the purpose of altering the empty weight of an aircraft to meet the maximum payload capacity.

This Special Federal Aviation Regulation No. 38-2 terminates [June 1, 1990], or the effective date of the codification of SFAR 38-2 into the Federal Aviation Regulations, whichever occurs first.

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